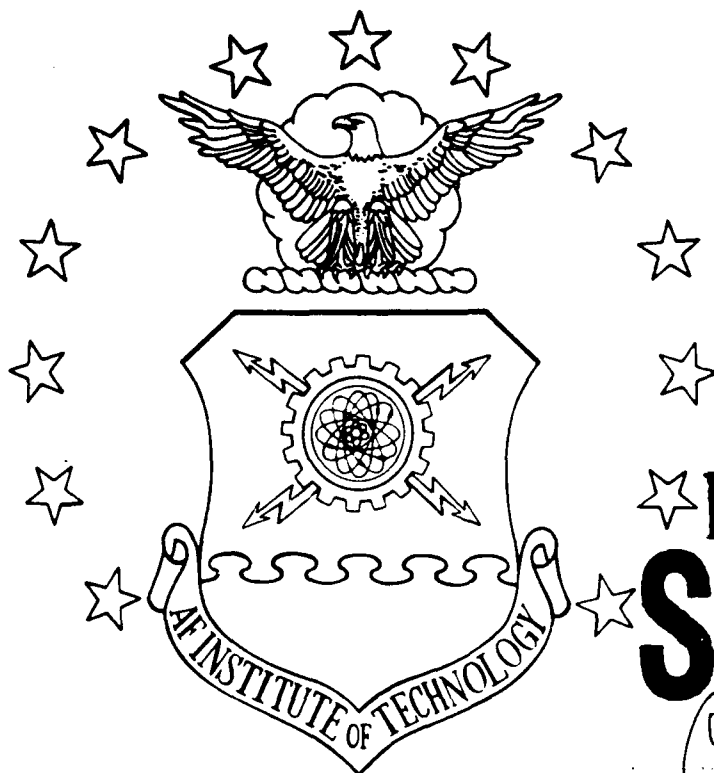


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VALIDATION OF THE LOGISTICS
PROFESSIONAL DEVELOPMENT PROGRAM
BY EXPERT SENIOR MILITARY
LOGISTICIANS

THESIS

William J. Grabowski, Captain, USAF

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VALIDATION OF THE LOGISTICS PROFESSIONAL DEVELOPMENT PROGRAM
BY EXPERT SENIOR MILITARY LOGISTICIANS

THESIS

Presented to the Faculty of the School of Systems and
Logistics of the Air Force Institute of Technology
Air University
In Partial Fulfillment of the
Requirements for the Degree of
Masters of Science in Logistics Management

William J. Grabowski, B.S.
Captain, USAF

September 1990

Approved for public release; distribution unlimited

Acknowledgements

I want to thank those who took time from their busy schedules to participate in this study. Their expertise was an immense help in validating the Logistics Professional Development Program. It will be an enhancement to scores of future senior logisticians.

I would also like to thank Major Cal Sims, my thesis advisor, first, for all of his help and guidance throughout this research project and second, for making this project "an enjoyable and rewarding experience."

I dedicate this thesis to my family. I wish to thank my wife Barb for her continued support, for without her I would have never made it. To my children Michael and LeAnn; thanks for being understanding of dad's limited time to share with you. Although it was not much in quantity, I hope it was of high quality.

Most of all, I wish to thank Jesus Christ, my personal Savior, for without whom I am nothing.

William J. Grabowski

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Abstract

The primary objective of this research was to externally validate, through the use of expert senior Air Force logisticians (to include active duty, retired and civil service), the appropriateness of the subject matter taught in the four tiers of the AFIT Logistics Professional Development Program (LOGPDP). A survey was administered to 40 of these experts; 26 were returned for a response rate of 65%.

Based upon analysis of the responses, it was determined that the current LOGPDP will be a tremendous aid in the successful development of senior level logisticians. The four tiers achieved consensus of 88%, 85%, 93%, and 87%, respectively, with an overall consensus of 88%. The researcher felt that as a whole, the only lesson in the entire LOGPDP that should be discarded is the "Management, Theory, Organization, and Styles" lesson in LOG 499. This lesson only reached a 57% consensus, the lowest of the entire LOGPDP. Some of the other lesson objectives were not well received and should possibly be revised, while the overall historical aspect of logistics needs more emphasis.

VALIDATION OF THE LOGISTICS PROFESSIONAL DEVELOPMENT PROGRAM
BY EXPERT SENIOR MILITARY LOGISTICIANS

I. Introduction

General Problem

In the epilogue to his book A History of United States Military Logistics 1935-1985, Jerome G. Peppers Jr. writes:

We can see that the intricacies of logistics have become more important to military success and more constraining. Strategy and tactics are today even more dependent on logistics than ever before in man's history. (24:291)

This intricacy, coupled with support infrastructure and troop strength drawdowns caused by a shrinking national defense budget and political changes throughout the world, make the demands for a responsive, quality logistician more severe than ever before. In his 1985 article in The Air Force Journal of Logistics entitled "The Challenge for Logisticians - The Future," Lieutenant Colonel Marvin L. Davis highlighted the idea that logistics processes and infrastructure currently in use are outdated in terms of current war fighting concepts and technology. Environmental and operational requirements are changing and will continue to change. Davis further stated that "Future battlefields will be radically different from anything thus far experienced" (5:3). Therefore, logisticians must be

knowledgeable in all aspects of the realm of logistics to be prepared for the multitude of possibilities they could face.

In order to ensure Air Force logisticians are equipped with the knowledge and skills required to confront these possibilities, satisfactory educational programs must be made available. Furthermore, to ensure these programs meet the logistician's educational needs, research must be conducted concerning logistics education programs in order to meet these requirements.

However, researching the educational needs of the military logistician cannot be done without first defining what is a military logistician.

The United States Air Force Dictionary defines logistics as:

1. a. In an operational sense, that part of the military activity that provides for the build up and support of a military force by providing for supplies, equipment, transportation, maintenance, construction and operation of facilities, movement and evacuation of personnel, and other like services, so as to render the military force efficient and effective in both combat and noncombat operations. b. Restrictive. The furnishings of supplies and equipment. 2. In terms of military theory, the art or science of building up a military force and/or providing support by the means suggested in sense 1, including aspects of recruitment, training, and assignment of personnel; the practice of this art or science. (27:305)

AFM 1-1, Basic Aerospace Doctrine of the United States Air Force gives this broad, all encompassing view of military logistics:

Logistics is the principle of sustaining both men and machine in combat by obtaining, moving, and maintaining

warfighting potential. Success in wartime depends on getting sufficient men and machines in the right position at the right time. (6:2-9)

A rather broad definition found in the Air Force Logistics Command (AFLC) Action Officers Handbook is:

Military logistics is a set of activities which, when taken together, constitute a system of creating, supporting and operating military forces on the battlefield. (8:1)

Based on these definitions of logistics, an Air Force logistician can be described as a person whose primary specialty or profession is in a logistics career area. That is, a person responsible for providing the combat support structure to sustain aerospace forces in battle.

Lt Col William C. Moening, the Wright Patterson AFB Contracting Center Commander, described a logistician as:

An individual who has the experience, training, skills and foresight to envision the entire logistics process of determining the requirement and seeing that requirement is satisfied with the right component when and where it is needed. (21:1-2)

AFR 36-1, Officer Classification, describes the duties and responsibilities of a logistics officer to encompass program formulation, policy planning, coordination, inspection, command and direction, and supervision and technical responsibilities pertaining to the Missile Maintenance, Aircraft Maintenance and Munitions, Transportation, Supply Management, Acquisition Logistics, and Logistics Plans and Programs utilization fields. Accordingly, a logistician is a person serving in any of the Air Force Specialty Codes (AFSC) listed in Table 1.

Table 1
Logistics Related Air Force Specialty Codes

<u>Code</u>	<u>Utilization Field Title</u>
31XX	Missile Maintenance
40XX	Aircraft Maintenance and Munitions
60XX	Transportation
64XX	Supply Management
66XX	Logistics Plans and Programs
0046	Director of Logistics
0096	Deputy Commander for Resource Management

(10:7-23)

The logistics disciplines for civil service employees and Air Force enlisted members are the equivalent that follow similar job designation/descriptions as listed for Air Force Officers.

As military members progress through the ranks they are expected to develop their professional career skills commensurate with the positions attained. This process is not new to the Air Force; it has always occurred at every echelon and activity. Accordingly, AFR 36-23, Officer Career Development, provides this Air Force view of career development:

The Air Force sought to develop most of its officers informally within the organizational structure. However, the Air Force today, because of the increasing technical complexity and sophisticated management needs, requires a formal career development program.
(9:A2-1)

Currently, there are several Professional Continuing Education (PCE) elective courses that are applicable to

various specific logistics specialties, such as the AFIT Senior Transportation Executive Development Program (specifically tailored for military transportation officers and civil service equivalents) and the Acquisition Planning and Analysis course (developed exclusively for Acquisition Program Managers). AFIT also offers numerous electives designed for other functional areas, such as the AFLC sponsored AFIT Materiel Management courses (i.e., Logistics Management and Provisioning Management). While all of these courses serve a needed purpose, there has been little or no demonstrable continuity between them (1).

Upon recognizing this disconnect, in July of 1986, HQ USAF/LE requested an input from Air University concerning the development of a Logistics Professional Development Program that would not only integrate the existing logistics courses such as "LOG 066 - Combat Logistics," (the forerunner of LOG 299), but would extend and integrate together the diverse logistics specialty boundaries.

In October 1986, representatives from Air Staff, Air University, and AFIT, held a colloquium whereupon they agreed that recurring education in logistics fields outside of the specialized boundaries was required. As a result, a four tiered program paralleling the major phases of a logistician's career progression was conceived. HQ USAF/LEXX formally agreed to sponsor these four proposed courses in March of 1987.

Based on this sponsorship, AFIT established the Logistics Professional Development Program (LOGPDP) as a series of four PCE courses for both active duty military and civilian personnel engaged in logistics disciplines.

This program begins with the first course entitled "LOG 199 - Introduction to Logistics." It was developed to provide an overview of the Air Force logistics environment to personnel initially assigned to a logistics career field from a non-logistics specialty or those just entering the service with a direct assignment into a logistics career field. This 10 day course is offered to officers in the grade of Second Lieutenant through Major, Civil Service employees ranging from GS-5 through GS-12, and enlisted personnel ranging in rank from Technical Sergeant through Chief Master Sergeant (1:40).

The second tier, "LOG 299 - Combat Logistics," was generated to provide an overview of the wartime roles and responsibilities of the logistician along with an understanding of how logistics contributes to the overall war effort. This second tier is a 12 day course offered to Captains, Civil Service employees ranging from GS-9 through GS-13 and enlisted personnel from Master Sergeant through Chief Master Sergeant (1:58).

Presently under development for logisticians is the third tier of the LOGPDP, "LOG 399 - Strategic Logistics Management." It was designed to broaden student understanding of the total logistics system from the

national through the operating levels, and improving the decision-making skills of logisticians at those levels. This third tier is a 10 day course offered to officers in the grades of Major and Lieutenant Colonel, Civil Service employees in the grade of GS/GM-13 and GM-14, and enlisted personnel in the grade of Senior Master Sergeant and Chief Master Sergeant (1:74).

Development has begun for the fourth and final tier, "LOG 499 - Senior Logistics Officer Development." This course is aimed toward enhancing the senior manager's comprehension of Air Force logistics doctrine, principles, organizations, and environment within the broader context of national policies and objectives. This six day course will be limited to Lieutenant Colonels, Colonels, GM-14s, and GM-15s (1:77).

Specific Problem:

The requirement for a four-tiered logistics professional development program has been agreed upon and confirmed. AFIT has established the general topic areas and individual lesson objectives for each course based on the course objectives requested by Air Staff. AFIT has established and implemented the first two tiers of the LOGPDP. Additionally, they have recently developed the initial topic proposals for the third and fourth tiers. The first course offerings for these two courses are presently scheduled for January 1991 and December 1990, respectively.

However, the lesson objectives established have never been externally validated.

The intent of this research project is to determine if experienced senior level Air Force logisticians believe the established and proposed topic areas and blocks of instruction of the LOGPDP are meeting the needs of the Air Force. This evaluation process includes examining the LOGPDP courses both independently as individual tiers and as a whole, all in an effort to ascertain what topic areas are the most beneficial for educational growth throughout the logistician's career to meet Air Force needs.

The remaining portion of this chapter will define the specific research objectives and associated research questions, the scope of the research, and the structure of the study.

Research Objective

The primary objective of this research is to externally validate, through the use of expert senior Air Force logisticians (to include active duty, retired and civil service), the appropriateness of the subject matter taught in the Logistics Professional Continuing Educational Program.

Investigative Questions

To complete the primary research objective the following series of questions will be pursued:

1. Do expert senior logisticians believe the current lesson objectives established for the introductory tier of the LOGPDP appropriately develop newly assigned logisticians?

2. Do expert senior logisticians believe that the current lesson objectives established for the secondary tier of the LOGPDP orient logisticians toward their combat roles and responsibilities?

3. Do expert senior logisticians believe the currently proposed lesson objectives for the third tier of the LOGPDP increase student comprehension of the interrelationships and interdependencies of strategic logistics management?

4. Do expert senior logisticians believe that the currently proposed lesson objectives for the fourth tier of the LOGPDP increase student perceptions of the issues currently facing senior Air Force logisticians?

5. Do expert senior logisticians believe that the lesson objectives as a whole, both current and proposed, aid in development of senior level logisticians?

By answering these five investigative questions, the original research question, "Do expert military logisticians believe the current LOGPDP appropriately develops senior level logisticians?," can be answered.

Scope

The scope of this study is to externally verify course lesson objectives for the LOGPDP through a survey of senior

level logisticians who have been identified as experts in more than one logistics specialty. Additionally, the survey will provide the respondents the opportunity to recommend lesson objectives not presently included in the LOGPDP. Backed by the expertise of these senior military logisticians, the individual course directors can tailor their course structure and lesson objectives appropriately.

Limitations

This study has several limitations. The first is the general nature of the study. It will address the lesson objectives for each tier of the LOGPDP, but will not address the length of instruction for each objective, nor the sequence in which they are taught. Secondly, it will not address the method of instruction, ie: classroom, interactive video conference, pre-recorded video, or correspondence. This study only investigated the beliefs of selected senior level Air Force personnel toward preselected lesson objectives. It does not attempt to rank order these objectives in order of importance, but rather in order of applicability.

Organization of the Study

The balance of the study is presented in chapters II through V. Chapter II provides the review of current literature concerning logistics and education. Chapter III supplies the methodology used, justification of the survey approach, discussion of the survey questions, population

description, and the statistical analysis plans. Chapter IV describes the recording of the findings, statistical tests, and an analysis of the findings. The researcher's conclusions, practical implications of the results, and recommendations for follow-on research are presented in Chapter V.

II. Literature Review

This chapter outlines the current literature describing the Air Force logistician's scope of responsibility, both present and in the near future. The chapter begins with an examination of the individual qualities required to be a logistician in the primary logistics specialty fields. Afterward, the individual LOGPDP courses are described.

The Need For Education Beyond Specialty Boundaries

Dr. W. Edwards Deming, the man who developed the quality process that has been credited with revitalizing Japan's industrial base after World War II, states:

It is not enough to have good people in your organization. They must be continually acquiring new knowledge and the new skills that are required to deal with new materials and new methods of production. Education and retraining - an investment in people - are required for long-term planning. (28:84)

General Clark, former commander of the Central Army Group, North Atlantic Treaty Organization (NATO), restated this same philosophy when he said that logisticians have too often become trapped in their own specialties, such as supply or transportation, and have forgotten that they have a primary responsibility to train and lead people. He summarized his beliefs with "A good leader will produce a good unit, one that gives good logistics support" (4:36).

According to Lieutenant General Leo Marquez, former USAF Deputy Chief of Staff, Logistics and Engineering, we

have "stovepiped" our logistics officers into narrow specialized logistics options. Stovepiping is the process of restricting one's growth to a specialized area. This develops logisticians with great depth but little breadth. They have no concept of the integrated logistics system. By not recognizing the need for visualization of broad-based logistics, but rather focusing in on their functional specialization, officers are reaching senior level positions unprepared to manage the totality of today's widely diverse and complex logistics systems. Logisticians require a complete sensitivity of the entire logistics spectrum. The challenge is to become a complete logistician (17:2).

Lieutenant General Marc C. Renolds, former Vice Commander of AFLC, supported this view when he voiced his concern over the "stovepiping" of logistics officers enrolled in the AFIT School of Systems and Logistics graduate/masters program in logistics management. His proposed solution was to eliminate student specialization in areas like maintenance management and supply and have only one generic logistics program, with contracting to remain the sole specialization option (15).

Air Force Systems Command has also experienced the adverse effects of stovepiping. It has a continual problem developing enough acquisition officers with the broad experience necessary to become program directors. To deal with this shortage, Systems Command has developed a comprehensive career blueprint for developing career

officers. The blueprint, known as the Acquisition Management Career Development Program, is designed to produce "The kind of acquisition managers we wish we were," said (then Major General, now General) Ronald Yates, chairman of the commission that developed the plan (16:22). The Career Development Program has four certification levels, each requiring the candidate to acquire predetermined types of specialty training, experience, academic education, and professional military education at particular points in his career (16:23-24). Lt General George L. Monahan Jr., the Air Force military deputy for acquisition, stated that an officer should have strength in a variety of disciplines: engineering, testing, configuration management, program control, manufacturing, and integrated logistics support. But:

The common tendency has been to get into one area of business and attempt to stay there. Then, when these logisticians have the level of seniority that should put them into senior positions, they don't have the necessary breadth of experience or knowledge. (16:22)

This breadth is recognized in the experienced logistician who is capable of prioritizing, directing, and controlling the combined operations of supply, maintenance, mobility, engineering, transportation, and program planning. Benjamin Blanchard, author of Logistics Engineering and Management, has supported this concept of a broad-based logistician. Specifically, he believes that individuals who comprehend the interrelationships between the various elements of logistics are better suited for additional

responsibility. He stated that logisticians must be able to visualize the logistics process from the total systems perspective (3:340).

Captain Frank Gorman, in his 1986 MS thesis, addressed this same concept when he stated there was a need to develop senior level logisticians capable of managing the ever-changing spectrum of logistics systems. In his logistics career development model, Gorman emphasized that professional education forms the foundation for an officer attempting to comprehend the total logistics system (12:33).

Captain Richard A. Andrews, (USAF Ret), repeated this recommendation for a broad knowledge base when he wrote:

The logistics field has become so specialized, that many people only work one small area of just one element of logistics and never really gain a true understanding or appreciation of the total field and how their job fits into it. (2:1)

Lt Col Moening affirmed that one of the most important attributes a military logistician must possess is the ability to comprehend the entire military logistics process. He believed that logisticians must be multi-disciplined individuals (21:2).

Captain Ralinda Gregor, in her 1987 MS thesis, expanded on this concept in her research to determine the ideal qualifications for the senior Air Force civilian logistician. She accomplished this task through a panel of both retired and active duty experts selected from a wide variety of backgrounds. These ideal qualifications were

synthesized into a descriptive model. Next, she surveyed the entire population of GM-15 logisticians to see how well they "fit" this descriptive model. Her research provided an insight between the 20 senior civilian logisticians who best fit the model and those who scored lower. It should be noted that those who were rated highest are not necessarily the most qualified overall, but rather have the necessary credentials for advancement. Those who scored highest on her model were involved in those activities that broaden the logistician's outlook. Those with near perfect scores had been exposed to new ideas through involvement in PCE. "They are being exposed to the needs and requirements of logistics and weapon system users through various operational assignments and PME (Professional Military Education)" (13:13).

This idea was enumerated by Margaret White's committee on the professionalization of the logistician, which determined that the professional logistician should be experienced in at least three "logistics disciplines to be better equipped to cope with the high technology explosion of the 1990's" (29:1).

This concept of a broad knowledge base was again reinforced when in 1985 the United States Air Force Outline of Proposed Logistics Training Initiatives recommended the implementation of career development programs for military personnel assigned to logistics disciplines. This proposal was based on the realization that:

Most logistics officers are assigned to relatively narrow specialties where it is difficult for them to understand all of the discipline inter-relationships and see the "big picture." In aircraft maintenance, a major who understands wholesale and retail supply is as rare as a supply officer who truly knows all the factors related to sortie production. All too often, the only thing that ties all logistics functions together is "the school of hard knocks." There is an obvious need to establish a broader perspective among officers assigned to logistics disciplines. (26:26)

These authors have all reached the same conclusion: logisticians need a comprehensive, broad-based knowledge of the logistics spectrum to be productive in their area of expertise. The following portion of this chapter outlines the broad range of educational subject matter recommended for Air Force logisticians by several researchers.

Educational Topic Areas for Logisticians

The research thesis of Captains Gurney Handy Jr. and Ronald L. McCool was the genesis of the Combat Logistics course offered by AFIT. Their research determined two primary needs exist in the field of logistics: "A continuing need to relate logistics functions to combat activities and a commensurate ongoing need to avoid excessive functional specialization." For some aspects of the above, education may be the only means of exposing logisticians to certain aspects of combat logistics such as materiel buildup during the early stages of deployments. They went on to say that a combat logistics course would pinpoint wartime/peacetime procedural differences and lead to a better understanding of how to handle the wartime environment (14:11).

This concept was further emphasized by Col Gordon P. Masterson, when he wrote in his Air War College report that the Air Force should offer the opportunity for full career development of selected officers in every logistics specialty. He believed that logistics officers should possess knowledge in the numerous areas of logistics listed in Table 2. Additionally, he felt that all logisticians should be required to take the appropriate specialty courses listed in Table 3.

Table 2

Knowledge Requirements for Logistics

Supply	Principles of Rocket Engines
Procurement	
Statistical Analysis	Principles of Reciprocating and Jet Engines
Merchandising	Aircraft Installed Systems
Maintenance Control	Aerospace Munitions
Production Management and Control	Motor Vehicle Resource and Maintenance Management
Production Management	Retailing
Logistics Planning	Accounting Principles
Employment of Missiles	Subsistence Technology
Receipt Storage and Dispensing Methods	Commercial Carriers
Air Frame Construction	POL Operational Procedures
Food Nutrition and Food Marketing	Passenger, Property, and Freight Scheduling

Table 2 (Continued)

Maintenance Capabilities	Packaging Methods and Specifications
Fuels Management Systems	Employment of Avionics
Procurement Management	Characteristics of Petroleum Products
Computation of Transportation Rates	Trade Procedures
Transportation Contract Negotiations	Supply Systems
Interrelationships of Elements of the Materiel Field	Reporting and Display System
Quality Control	USAF Supply Policy Doctrine
Laboratory Testing Procedures	Government Law
Internal Combustion Engines	Motor Vehicle Fleet Management
Operating Budget Preparation	Plant Layout
Supply Data Systems	Maintenance Management Policies
Transportation	Aerial Port Operations
Capabilities of Military Air Transportation	Inventory Control
	Avionics Systems

(19:43-45)

This researcher agrees that Masterson's list of knowledge requirements for logistics contains topic areas relevant to one or more of the logistics specialties; however, this researcher does not feel that an in-depth knowledge of all these topic areas apply to all logistics disciplines. These include topics such as principles of

rocket engines, food nutrition and food marketing, and merchandising. Knowledge of these topics is beyond the breadth of knowledge required for most logisticians. This researcher agrees that logisticians need the appropriate specialized educational courses as proposed by Masterson to provide a greater depth of knowledge in their specialty.

Table 3

Professional Continuing Education Requirements for Logistics

Aircraft Maintenance Course	Avionics System Maintenance Course
Aerospace Munitions Course	Explosive Ordnance Disposal Course
Procurement Course	Procurement and Production Officer Course
Advanced Logistics Course	
Data Automation Course	Transportation Officer Course
Supply Staff Officer Course	

(19:47)

Another researcher, Professor Peppers, expressed his belief that the study of logistics history is vital to all who now work or will work in the logistics profession. He added that the relationships between combat and logistics are complex and interlaced. "An appreciation of these relationships is essential for a true understanding of warfare because both are part of the whole" (24:291).

All of these researchers share the same conclusion: In order to support and sustain operations, the Air Force needs

to develop logisticians educated in a wide range of topic areas. However, there has been no single vehicle that provided this education in a timed, sequential, programmatic manner.

This was recognized and corrective measures undertaken when Lt Gen Leo Marquez expressed to the Air Force's Air University commander, Lt Gen Thomas Richards, the need to:

Explore ways to enhance student exposure to combat logistics, and to increase their appreciation for how the concepts and techniques they learn can be applied to, or are limited in, warfighting applications.
(18:1)

Marquez followed that by voicing the requirement for a firm program to "round out" our logisticians.

We need to take the next step and identify a logical flow of courses to produce well-rounded logisticians. Some courses may have to be created. If so, Air Staff will support them. (18:1)

Through subsequent meetings between Air Staff functional management working groups and AFIT academic representatives, the development of a logical educational process for the professional logistician's continuing education was underway.

The Logistics Professional Development Program

Andrews explained the concept used in the development of the AFIT acquisition courses when he said "We need to refresh the experienced logistician and properly educate the novice on the very foundational elements" (2:5). To implement this philosophy into the LOGPDP, a determination of potential students' knowledge should be assessed prior to

course development. This would allow for both efficient and effective instruction. In the book "Learning How to Learn," David Ausubel states:

If I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly. (22:40)

The LOGPDP was developed with this theory in mind and became a continuing series of courses built upon the foundations established in the first tier. Topics are introduced and discussed in one tier, and followed with more in-depth analysis in subsequent tiers. Students enrolled in the first tier of the LOGPDP are relatively new to the field of logistics and come from a diverse range of logistics specialties. Because of their lack of common background, the initial course provides the foundation of knowledge for the remaining tiers. Each sequential course of the LOGPDP builds upon the knowledge acquired in the preceding course. Subsequent LOGPDP courses introduce new topics and wean out others as the logisticians progress through their professional careers. For example, new logisticians don't require comprehensive knowledge of Joint Deliberate Planning in order to be productive at their job, nor do senior logisticians need a refresher on a topic such as Organizations involved in the Air Force Logistics Environment; however, they might discuss reorganization in order to provide better operational support. Each course of the LOGPDP will now be discussed independently.

LOG 199 - Introduction to Logistics

Description. This initial course of the LOGPDP is designed to provide a conceptual overview of Air Force logistics (with emphasis on wholesale activities), to include the environment, organizations and planning, as well as an examination of the integration of logistics systems, functions, principles, processes, and issues. The primary objectives are:

- To provide logisticians newly assigned to the logistics field with a broad based introduction to logistics including its roles and meaning, environment, principles, processes, and functions.
- To develop managerial capabilities based on a foundation of appropriate logistics principles and concepts.
- To improve managerial practices by stressing the critical need for integrated action by all elements of the logistics environment.
- To provide an introductory course as a baseline to build upon in subsequent courses of instruction.

Course Methodology. Most blocks of instruction are taught through informal lectures averaging between one and a half and three hours. The course includes a six to eight hour simulation in which the student is able to apply the concepts and decision-making techniques learned in order to solve operational support problems.

Target Audience. The grade spread considered appropriate for attendance in this tier of the LOGPDP is

officers in the rank of 2nd Lieutenant through Major, civilians in the grades GS-5 through GS-12 and enlisted in the rank of Technical Sergeant through Chief Master Sergeant.

Justification. The Air Staff provided the following justification for the establishment of this course:

Recent renewed emphasis by the Air Force on improving combat support has generated a new awareness of the need to develop a conceptual overview of Air Force logistics for personnel initially assigned or pending assignment to logistics career specialties. This course will fill a long standing void for an Air Force introductory logistics course. Personnel previously relied on attending as many diverse specialty AFIT, ATC (Air Training Command) and other DMET (Defense Management Education and Training) courses as their schedules and availability of appropriate course quotas would allow. Many attend on a hit or miss basis. There has been no individual course designed or specifically intended to provide newly assigned Air Force logistics personnel with a broadly structured, integrated overview of Air Force logistics. (25:2)

LOG 299 - Combat Logistics

Description. Combat Logistics provides logisticians with an overview of combat logistics plans, strategies, and procedures that will likely be implemented in a wartime scenario. It is designed to provide an understanding of how logistics contributes to the overall war effort and war requirements. The primary objectives are:

- To provide a structured orientation in the wartime roles and responsibilities of logisticians.
- To define how these roles and responsibilities are integrated into overall USAF and DOD wartime preparations.

- To acquaint logisticians with wartime planning documents and combat logistic procedures.

- To provide an anchor to which subsequent on-the-job training and formal development of logisticians can be tied.

Course Methodology. Most blocks of instruction are taught through informal lectures averaging between one and a half and three hours. The joint deployment exercise averages nine to ten hours in length. This exercise affords the students an opportunity to apply the learned principles of joint planning in preparing a portion of a force list and the strategic movement plan for a simulated operation plan.

Some selected briefings are presented in a classified mode.

Target Audience. The grade spread considered appropriate for attendance in this tier of the LOGPDP is officers in the rank of Captain, civilians in the grades GS-9 through GS-12, and enlisted in the rank of Master Sergeant through Chief Master Sergeant.

Justification. The Air Staff provided the following justification for the establishment of this course:

The recent Air Staff initiative to develop a Logistics Professional Continuing Education Program resulted in a four tier program to develop professional logisticians. This course shows the logistician how the logistics system is designed to function in a wartime environment and analyzes actual wartime performance. Implementation of the course directly supports the Air Force goal of providing the best combat support to our operational forces. (25:3)

LOG 399 - Strategic Logistics Management

Description. This course was established to broaden and deepen student understanding of logistics doctrine, policies, processes, programs, planning, functions, and current initiatives. It emphasizes logistics as a system through analysis of the interrelationships of acquisition, wholesale support, operational support, inter-service, and allied logistics. The primary objectives include the following:

- To broaden student understanding of the total logistics "system" (spectrum) from the national through operational levels.
- To enhance understanding of the roles, missions, responsibilities, interrelationships, and interdependencies which exist within the logistics framework for more effective combat support to forces.
- To improve the decision-making skills of logisticians at all levels of command through the practical application of management principles while participating in small group activities.

Course Methodology. The course includes informal lectures by faculty and guest speakers to establish a baseline for discussion, but emphasizes student involvement through practical exercises, simulations, and case studies.

Target Audience. The grade spread considered appropriate for attendance in this tier of the LOGPDP is officers in the rank of Major and Lt Colonel, civilians in

the grades GS/GM-13 and GM-14, and enlisted in the rank of Senior Master Sergeant and Chief Master Sergeant.

Justification. The Air Staff provided the following justification for the establishment of this course:

A recent Headquarters Air Force initiative of strengthening logistics education resulted in the development of a four tier program. Logistics courses currently offered were revised, while others were developed. This course replaces the current Logistics Management (LOG 224) course. LOG 224 contained many basic or introductory logistics topics redundant to mid-level manager education. The first and second tier courses (of the LOGPDP) provide these basic topics to entry and first-level managers. The creation of LOG 399 as the third tier in the four tier program permits focusing on the educational needs of the mid-level managers. (25:4)

LOG 499 - Senior Logistics Officer Development

Description. This purpose of this course is to provide senior logisticians the opportunity to examine management systems and values affecting Air Force programs. Policies, organizations, and issues currently affecting logistics will be discussed within the context of Air Force and DOD logistics systems. The primary objectives of this course include the following:

- To offer the most effective ways of assessing and influencing organizational and interpersonal behavior.
- To provide innovative approaches to leadership, decision making, and problem solving.
- To develop and improve executive level skills in communication, administration, and management.

- To enhance understanding of Air Force logistics doctrine, principles, organization, and environment in the broader context of national policies and objectives.

- To analyze the moral and ethical impacts of the senior level logistics decision-making process.

- To provide the opportunity to exchange ideas and assess problems among the various logistics disciplines.

- To examine the roles and different viewpoints of logistics decision-makers in service (USAF), joint (JCS, Unified/Specified Commands), and international positions such as NATO.

- To examine policy problems and strategic planning from a broad "Logistics" view rather than a functional point of view.

- To expand understanding of global logistics issues.

Course Methodology. This course will have a flexible curriculum to enable the students to examine the most current issues facing senior logisticians. Most topics will be introduced by faculty to establish a baseline followed by expert guest speakers who will address the issue's key elements.

Target Audience. The grade spread considered appropriate for attendance in this tier of the LOGPDP is officers in the rank of Lt Colonel and Colonel and civilians in the grades GM-14 and GM-15.

Justification. The Air Staff provided the following justification for the establishment of this course:

The recent Air Staff initiative to develop a logistics Professional Continuing Education Program resulted in a four-tier program to develop professional logisticians. This course fills a void for a logistics education for senior officers. It will replace LOG 092, (the) Senior Transportation Executive Development Program and extend this type of program to logisticians in all career fields. Failure to implement this course will deny our senior logisticians the opportunity to broaden their view of logistics policies, problems, and procedures. Development and implementation of this course directly supports the Air Force goal of providing the best combat support to our operational forces. (25:5)

Summary

This chapter commenced with a justification of the need for logistics education beyond the boundaries of the individual's specialty. This education is in addition to, not as a replacement for, specialized instruction. Next, it presented an outline of recommended educational topics pertinent to multiple logistics specialties. Finally, the Logistics Professional Development Program was outlined from inception to its present stage, with a short discussion on the individual tiers. The following chapter details the methodology used to verify the lesson objectives.

III. Methodology

Justification of Survey Approach

To determine the external validity of the four tiered Logistics Professional Development Program, data was collected from expert senior Air Force logisticians. The primary source data collection methods available were the mail survey, personal interview, and telephone survey. The researcher determined the best way to accomplish this task was through a mail survey.

Although the mail survey data gathering technique is second to the personal interview; time, geographical separation, inaccessibility, and monetary constraints mandated this method. No attempt was made at a telephone survey due to the high costs incurred with lengthy long distance telephone conversations and the extensive manhours that would have been necessary to extract the large amounts of data required from each respondent. Additionally, since the active duty senior military logisticians are frequently away from their home station performing temporary duty, the mail survey ensured contact with each respondent prior to performing a temporary duty or upon return to their duty station. In a mail survey, respondents can consider responses at length - something not easily accomplished with the personal interview or telephone survey data collection methods.

Survey Strengths

Versatility is a strength of survey questioning over other data collection techniques. Abstract information can be gathered only by questioning respondents. To learn the opinions, attitudes, and expectations of others would be difficult if not near impossible by any other means. A survey can gather as much information with well written questions as would a time consuming personal observation. C. William Emory, in his book Business Research Methods, states "Surveying can expand geographic coverage at a fraction of the cost and time required by observation" (11:158). Because mail surveys allow for anonymity of the respondents, they reduce the occurrence of respondents providing only socially acceptable responses and provides an opportunity for respondents to express opinions that are outside the norm without fear of repercussions.

Survey Weaknesses

The major weakness in using surveys as a data collection technique is the lack of response. Without a significant number of respondents the results are subject to bias. Other problems include respondents providing an opinion on a question for which they have no knowledge in an effort to "complete" the survey. The recommended solution to this problem is to provide the respondent the ability to respond with "undecided," "don't know," or "have no opinion"

(11:159). Also, should a question be poorly written, it can be misleading and taken out of context. All of the above provide false data and could nullify the results. The last major weakness of surveying is a respondent intentionally providing false data. It is difficult for researchers to analyze these happenings. Thus responses must be remembered as what they are - statements by others which may or may not be true. All of these weaknesses should be kept in mind when analyzing responses.

Survey Instrument Design

The Survey questions were developed based upon the current course syllabi for the first two LOGPDP courses, and the proposed course syllabi for the third and fourth tiers of the LOGPDP. This method was used to break down the first four investigative questions to their lowest level, or measurement questions. Measurement questions are those questions that are actually asked on the survey. These are very specific questions which will provide answers to the investigative questions. To answer the remaining investigative question, a series of open response questions were used to gather the respondent's beliefs of progression and continuity throughout the LOGPDP.

Sequence of Survey Development

Developing the draft survey took into account both subject content and wording for each question. A brief

analogy of the primary objectives, course methodology, and target audience was described prior to the questioning for that tier of the LOGPDP. The measurement questions were ordered first, according to the tiers within the LOGPDP process, and secondly, sequentially according to the order in which they are normally taught within each tier. This method was used to provide the respondent with an understanding of progression within each course and between the four tiers of the LOGPDP.

Once developed, the survey was reviewed by each of the four LOGPDP course directors. They reviewed the areas of the draft survey corresponding to their individual courses. This review was to ensure the individual measurement questions were correctly written in areas such as accuracy, wording, clarity, and misleading phrases. Corrections were made as necessary.

After making the changes recommended by the course directors, the survey was given to a group of AFIT instructors for further evaluation. Based on the comments and recommendations of this test group, the survey instrument was again revised to eliminate and/or clarify confusing or misunderstood areas.

Survey Validity

Survey content validity is the degree to which a measuring instrument provides adequate coverage of the topic under study. "Validity refers to the extent to which a test

measures what we actually wish to measure" (11:94). This was accomplished by the specific wording of the questions. Because the intent of the research project was to externally validate the topics being taught in the LOGPDP, the questions needed to provide a clear understanding of what is actually taught with each topic area. To achieve this, each question (with the exception of questions pertaining to demographics and those concerning the fifth investigative question) provided both the lesson title and the lesson objectives associated with that title. The lesson objectives were obtained from the current syllabi for the first two tiers and the proposed syllabi for the third and fourth tiers. They were expanded to provide clarity and rephrased, as necessary, to a vocabulary common to the respondents. A copy of the final survey is contained in Appendix B.

Demographics Portion

The first portion of the survey collected demographical and background data on each respondent. Since the respondent's logistics experience was unknown to the researcher, verification of the respondent's background in logistics was required. This was done to ensure each respondent met the defined criteria of an expert USAF military logistician.

Course Content Portion

To measure responses concerning both the current and the proposed course content by opinion or preference, an ordinal scale was chosen. Ordinal scales are those which indicate magnitude relationships of greater than or lesser than values. The most frequently used form is the Likert scale (11:255). The researcher elected to use a Likert scale because it possessed several advantages over other types of ordinal scales. It was simple to construct and easy to interpret. Emory reported that Likert scales provide higher reliability and provide a greater volume of data than the Thurstone scale (11:258). A five point scale was used because it provided respondents the opportunity to respond with a degree of approval/disapproval or indecision. The Likert scale used for this research is provided as Figure 1.

Strongly approve []	Approve []	Undecided []	Dis- approve []	Strongly dis- approve []
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Figure 1. Five Point Likert Scale

(11:246)

Finally, each section of the survey concluded with open-ended questions to afford respondents the opportunity to express opinions and suggestions not previously covered by the survey instrument.

Population Description

For the purposes of this research project, an expert senior military logistician was defined as an individual with a background in at least two logistics specialties, an overall minimum of ten years logistics experience, is known by his contemporaries as a knowledgeable logistician, and is familiar with the Air Force logistics system. The research required experienced logisticians as respondents rather than a cross section of the general population because it was felt that the expert would have a better understanding of the educational needs of the logistician.

Since the expert population was not identifiable by any single source, (such as their job title or the position they hold), but rather by their knowledge and experience level, it would be difficult to determine the true number of expert senior military logisticians that fit this description.

This proved unnecessary because a true random sample population was not required nor desired for this survey. Since the primary objective of this research project was to validate the LOGPDP through a collection and evaluation of expert opinions concerning the LOGPDP, rather than a true cross-section of the general population of Air Force logisticians, nonprobability sampling satisfactorily met the sampling goal. Nonprobability sampling is non-random, meaning that not all members fitting the overall population description have a chance of being included in the sample

population. Instead, the sample population was hand selected based upon their background.

Sampling Method

To draw a nonprobability sample that conformed to the requirements of this study, a purposive judgement sampling technique was used. This technique entailed handpicking respondents who conformed to the pre-defined expert criteria. Hence there is no mathematical formula to determine the size for this type of sample population. In this type of situation, the sample sizes are determined on an individual basis for each specific research project. A sample size needed to be determined for this project. This was done by invoking the Central Limit theorem. The Central Limit Theorem states:

If a random sample of n observations is selected from a population (any population), then, when n is sufficiently large, the sampling distribution of X will be approximately a normal distribution. In most real life applications, the shape of the population distribution will not be known. (20:319)

The concept of determining the sample population size based on the Central Limit Theorem should result in a normal distribution of the sample population, however statistician Lyman Ott states:

Numerous simulation studies have been conducted and the results suggest that, in general, the Central Limit Theorem holds for $n > 30$. However, if the population is heavily skewed, the sampling distribution will still be skewed even for $n > 30$. On the other hand, if the population is symmetric, the Central Limit Theorem holds for $n < 30$. (23:113)

In order to obtain the minimum sample size of 30 recommended by the Central Limit Theorem, the sample population size was expanded to 40, thus allowing for a 25% non-response rate.

Sample Population

The individuals determined to fit the criteria as described above (thus selected to participate in this survey) were recommended by Jerome G. Peppers, Jr., Professor Emeritus, AFIT, Terence H. Berle, Assistant Professor in Logistics Management, AFIT, and Lt Col David E. Lloyd, USAF, (Ret).

Professor Peppers is considered to be an expert in military logistics by virtue of his 50 years experience in both the military and civilian side of the profession as well as his extensive involvement in both the Society of Logistics Engineers (SOLE) and as a member of the editorial advisory board for The Air Force Journal of Logistics. His background provides for an extensive association with expert military logisticians.

Terence Berle has experienced the operational, wholesale, and acquisition aspects of military logistics throughout his 27 year career in the Air Force. He is a senior member and Certified Professional Logistician in the Society of Logistics Engineers. Professor Berle is also the course director for the fourth tier of the LOGPDP and instructs both AFIT graduate level and PCE courses.

Professor Lloyd recently retired from the Air Force and the AFIT faculty, where he is considered extremely knowledgeable on logistics issues. Throughout his active duty career he served in a multitude of logistics related specialties. His last active duty assignment was at the AFIT School of Systems and Logistics where he was an Assistant Professor of Logistics Management. His consulting and research interests include logistics education, logistician career development, logistics change institutionalization, and logistics system integration.

Based on the recommendations of these three individuals, the sample population of qualified military logistics experts was selected.

Data Collection Plan

A survey package was mailed out during the second week of June 1990 to the sample population of expert senior military logisticians. The survey package contained the following three parts:

- 1) A cover letter explaining that the respondent was recognized as an established expert in the field of military logistics and described the purpose of the survey (see Appendix A: Cover Letter). A response no later than date, or deadline date, was also included in the cover letter. The respondents were allowed ten working days from receipt to complete and mail their responses. Inclusion of a deadline date does not necessarily increase response rates, but

according to Emory, it does accelerate the rate of return of surveys (11:174). The cover letter also informed the respondents of Air Staff's sponsorship of the LOGPDP. Although there has been little research accomplished dealing with survey sponsorship, what there is shows official sponsorship tends to increase response (11:173).

2) The five part survey instrument itself and the instructions required to complete and return the survey.

3) Postage paid, pre-addressed return envelopes. This encouraged response rates as it provided both a means to facilitate returning the surveys and ensured they were returned to the proper address (11:173).

Improving Mail Survey Returns

In an effort to increase the total number of surveys completed for this research project, several proven methods were implemented.

Advance notification, that is, contacting the respondents by telephone prior to mailing the surveys, was done. This generally increases response rates and accelerates the rate of return. (11:173)

Follow-up phone calls were made to remind those who intended to respond to the survey, but for some reason put it aside, of its importance. This technique is almost always effective in increasing response rates (11:173).

Statistical Tests

Because the values on the Likert scale used in the survey have a rank order meaning, the appropriate measurements are those of central tendency (11:89). This is accomplished through measurement of the median and the mode. These measurement techniques are described here.

"The median of a data set is the middle number when the measurements are arranged in ascending (or descending) order" (20:82). To calculate the median, first arrange the measurements from the smallest to largest. If the number of measurements is odd, the median is the middle number. If the number of measurements is even, the median is the mean (average) of the middle two numbers (20:83).

The other appropriate central tendency measurement is the mode. That is, the measurement that occurs with the greatest frequency in the data set (20:76). Unless the data set is very large, the mode may not be a meaningful representation of the data. To overcome this and transform this measurement into a more meaningful measurement of central tendency, a relative frequency histogram was constructed. A relative frequency histogram is a graphical representation of the response frequency. This measurement system combines measurements into classes, referred to as a modal class (20:76-77). For the five point Likert scale used in this research project, the data will be divided into three modal classes; approve (composed of both strongly

approve and approve), undecided, and disapprove (composed of disapprove and strongly disapprove).

Analysis Method

The researcher determined that for the purpose of this project, an agreement over 70% would constitute a consensus. The percentage selected to be the cut-off is purely subjective. In this application it merely provides a point of reference and is not to be construed as a hard and fast measurement. If the measurement question had a 70% modal agreement within the sampled population, then that measurement question was considered to have obtained consensus. Following that, each tier of the LOGPDP was evaluated for consensus. If 70% of the survey questions for that tier obtained consensus, then that tier was determined to have obtained consensus. Next, the overall LOGPDP (with the exception of the open ended questions) was evaluated for consensus. If 70% of the total survey questions obtained consensus, then the LOGPDP as a whole had obtained consensus. The additional computation of the median demonstrated any skewedness in the responses.

Next, the individual lesson objectives were rank ordered within each tier of the LOGPDP from those with the highest consensus to those with the least consensus. This was accomplished for all tiers.

The purpose of this rank ordering was to provide the individual course directors a prioritized listing of lesson

objectives. This listing will assist them in determining where to place the most importance, should it become necessary to make changes in the curriculum.

Finally, the responses to the optional open-ended questions were evaluated. These questions asked the respondents to suggest additional topic areas not presently included in the syllabi which they believed appropriate for that tier of the LOGPDP. These proposed topics were ordered by frequency of recommendation, that is, if a topic was recommended by three respondents, it was ranked higher than topics only recommended by two respondents. This will provide the four course directors with a summarization of recommended additional topics, should it become necessary to make changes in the curriculum.

Chapter Summary

This chapter reported the methodology that was used for data collection to determine the answers to the research and investigative questions. It started with a justification of the mail survey used, explaining both the pros and cons of this method. Next the sequence of survey development was outlined. The measurement techniques for demographics and course content were presented, followed by a description of the population and the method used to identify the sample population. The statistical techniques used to determine the median and mode were presented. Finally, the process

used to analyze the data was explained. Chapter IV explains the results of the data collection.

IV. Analysis and Findings

Chapter Overview

This chapter examines the findings and analysis of the data obtained during the research process. Information concerning the overall survey response is discussed, followed by a demographic breakdown of the respondents.

Next, the chapter continues with an analysis of the results compiled during the mail survey. Each set of survey questions related to an investigative question is analyzed according to the methodology outlined in the previous chapter. The findings reached for each investigative question are then discussed, concluding with summarized comments for each investigative question.

Survey Response

The data collection was terminated on July 27th, 5 weeks after the initial survey mailing date. 26 of the original 40 surveys were returned. This equated to a response rate of 65%. Since the number of responses was below the Central Limit Theorem recommended minimum level of 30, the data is subject to the bias of the respondent populace.

Respondent Demographics

The demographics of the respondents is first portrayed by the highest military and/or civil service rank attained.

The sum of the responses exceeds the total number of survey respondents as four respondents had both military and civil service backgrounds. The respondent demographics is broken down by rank in Figure 2. The lowest ranking respondent was that of Major. One of these two continued with a second career in the civil service and retired as a GM-15. The highest rank was that of General. The Senior Executive Service was a level III - equivalent to a Major General.

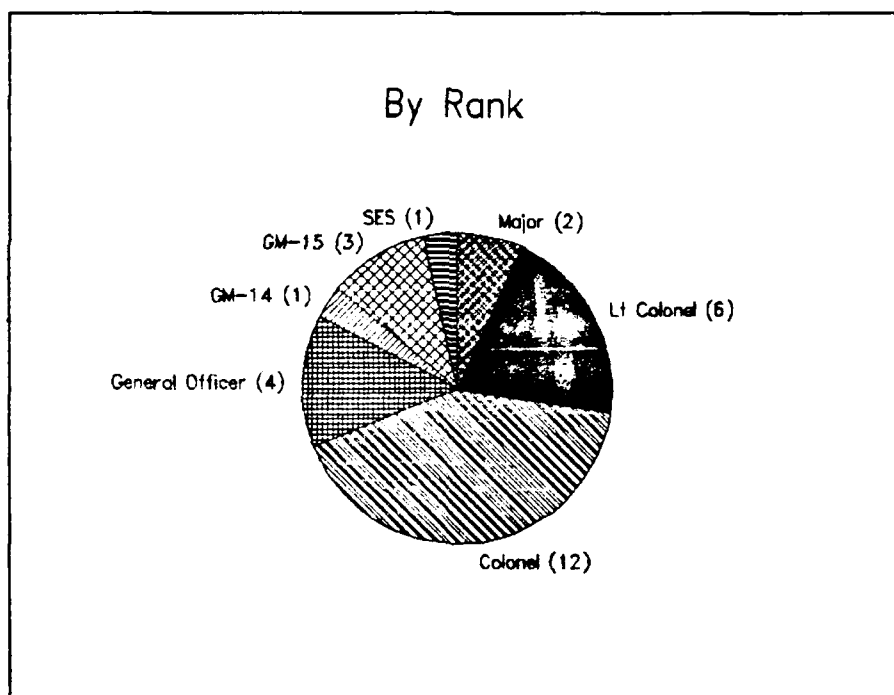


Figure 2. Demographics by Rank

Next the work history of the respondents is broken out in total years experience by Air Force Specialty Code. The respondents have a combined logistics experience of 601

years, with an average of slightly over 23 years experience per respondent. The least experienced respondent had 15 years of logistics experience, well above the 10 year minimum requirement. The most experienced respondent had a total of 40 years experience in military logistics. When combined, the respondents had an exceptionally high background (107.5 total years) in the 40XX (Aircraft Maintenance and Munitions) career field relative to the other career fields. This high level could cause a favorable bias when respondents are evaluating maintenance related lesson objectives, or unfavorable bias when evaluating other areas such as supply or transportation. In other words, they could tend to favor the lessons they are most familiar with and reject those that are unknowns. The category called "Other" was composed of "special duties" the respondents had. This included special duties such as AFLC commander, Aeronautical Systems Division commander, and MAJCOM Deputy Chief of Staff Logistics, among others. The respondents cumulative experience in the various logistics related Air Force Specialty Codes is displayed in Figure 3.

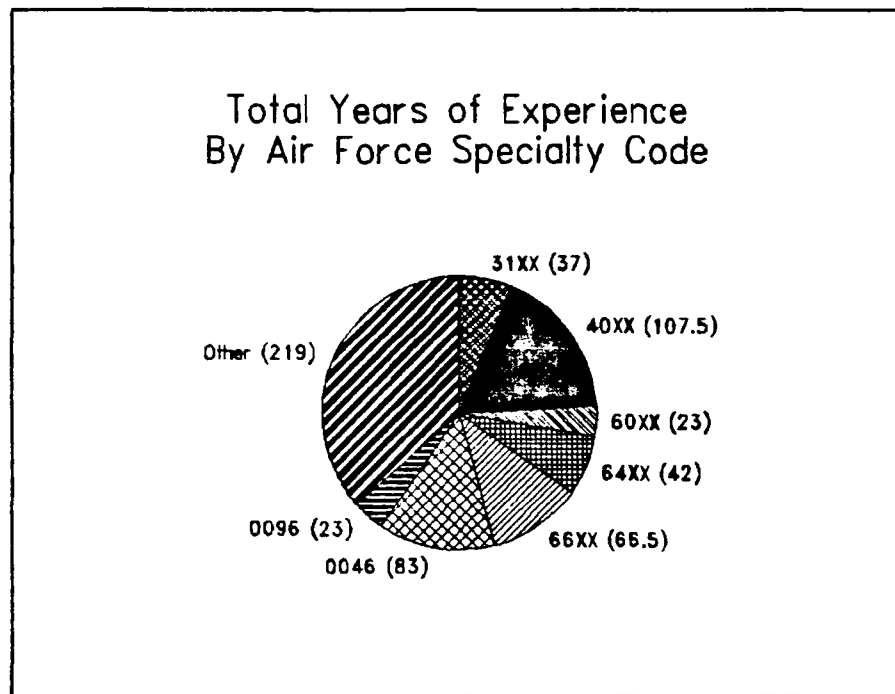


Figure 3. Demographics by AFSC

Figure 4 breaks down the respondents work history by command experience. Air Force Logistics Command (AFLC), Strategic Air Command (SAC), and Air University (AU) composed nearly 61% of the respondents background. Those with an AFLC background primarily have a strong grasp on wholesale and acquisition logistics while the respondents experienced in SAC understand tend to favor operational and strategic logistics most. Respondents with previous assignments to Air University should have a deeper understanding of the learning process and the building block concept employed in the four tiered LOGPDP.

All of the survey respondents met the predetermined requirements to be classified as an expert in the field of logistics. All of the respondents had experience in a

minimum of at least two logistics specialties. Additionally, each respondent exceeded the minimum of ten years logistics experience requirement by at least 50%. Only respondents known to be "expert" logisticsians were selected to participate in this survey.

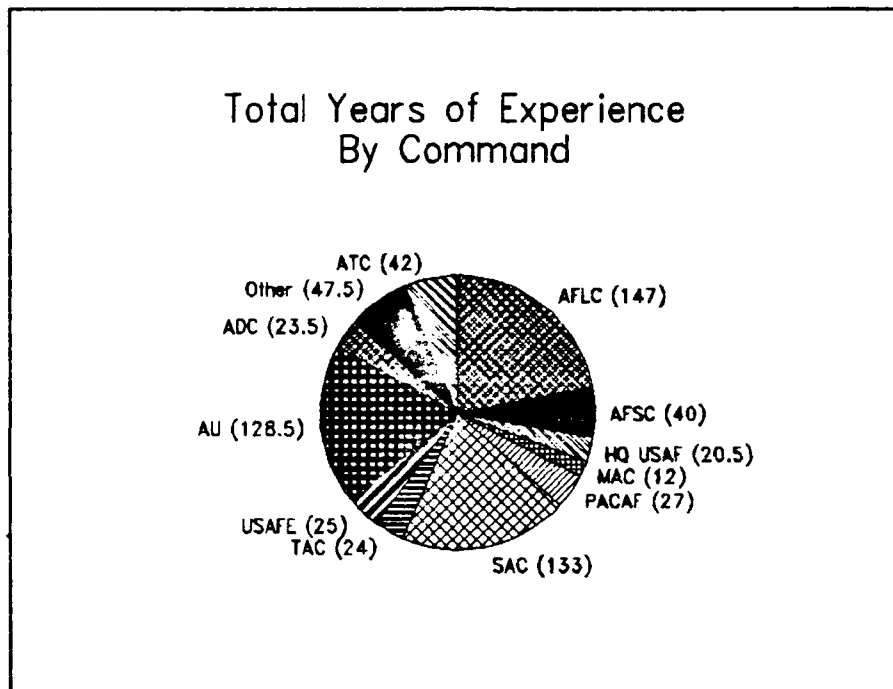


Figure 4. Demographics by Command History

Investigative Question #1 Analysis

The first investigative question was to determine if expert senior logisticsians believe the current lesson objectives established for the introductory tier of the LOGPDP, (LOG 199), appropriately develop newly assigned logisticsians.

As determined in chapter III, consensus is obtained when at least 70% of the respondents approved of the lesson

objective. This approval is the combined "Strongly approve" and "Approve" modal class.

Consensus on all measurement questions for this tier of the LOGPDP was obtained with the exception of one. Overall, this tier obtained a consensus of 87.8%, which was second highest among the four tiers. Of this tier, only the first lesson, "Overview of Logistics," gained concurrence from the entire population. Furthermore, 68% of the respondents selected "Strongly approve" for this lesson. This indicates that perhaps it is the most important lesson of this tier. One respondent commented that as an introductory course, this lesson objective should consume 50% of the total class time.

The population did not concur that the "Reutilization and Marketing" lesson objective (measurement question # 23) should be part of an introductory course for logisticians. This question only had a 68% concurrence. The single comment for this topic was to include it in the "Logistics Overview" lesson. Measurement question #11 (Logistics Support Analysis) obtained consensus by a small margin, with only a 72% consensus. Although there were few comments concerning this topic, the respondents suggested that it also should be included, but without detail.

If the respondents' recommendations to combine select lessons such as "Reutilization and Marketing" with the "Overview of Logistics" block were to be accepted, it would indeed consume a larger portion of the course time.

However, that would simply be a shift from where it is presently allocated. Thus the same topics will be covered in the same length of time, just under different topics. Another respondent claimed that new logisticians need to be introduced to the broad spectrum of logistics, rather than over-specialization. That comment actually sums up the basis for developing the LOGPDP; to provide a broad view of the entire logistics spectrum to the logistician.

The lessons are listed in rank order from highest to lowest consensus in Table 4. Whenever multiple lessons had equal concurrence, the lesson with the most "Strongly approve" responses was listed first.

There were several recommended additional topics for this tier. Two respondents recommended that a "history of logistics" be included in the syllabus. Since almost all current plans are based on past lessons learned, this seems to be appropriate. Additionally, they felt that logisticians need to understand that there is not always a textbook answer to every problem. There can be and often are contrasting/conflicting views to most problem solving methods and the new logistician should be exposed to them. One respondent recommended Total Quality Management be added, while another suggested an introduction to economics. The recommended additional topics are listed in Table 5. They are listed first by the order of frequency of recommendation, and then alphabetically.

Table 4

LOG 199 Consensus Ranking

Lesson Title	Consensus	*Mode
Overview of Logistics	100%	1
Major Systems Acquisition	96%	1
The Defense Transportation Management System	96%	2
Logistics Information Systems	96%	2
Equipment Maintenance	96%	2
Operational/Wholesale Supply Management	92%	2
Logistics Planning	92%	2
LOG Plan-X Exercise	92%	1
Quality, Reliability, and Maintainability	92%	2
Requirements Forecasting	92%	2
Equipment Management	92%	2
Federal Financial Management	88%	1
Contracting Management	88%	2
Provisioning	88%	2
Integrated Logistics Support	84%	1
Organizations Involved in the Air Force		
Logistics Environment	84%	1
Overview of International Logistics	84%	2
Future Logistics Issues	76%	2
War Reserve Materiel (WRM)	76%	2
Logistics Support Analysis (LSA)	72%	2
Reutilization and Marketing	68%	2
Overall Consensus:		87.8%

- *1 = Strongly approve
 2 = Approve
 3 = Undecided
 4 = Disapprove
 5 = Strongly disapprove

Table 5

Recommended Additional Topics for LOG 199

Title	Times Recommended
History of Logistics in Military Actions	2
Decision-Making Under Uncertainty	1
Micro-Economics/National Economic Relationships	1
Total Quality Management	1

All comments received on this tier are contained in Appendix C. A breakdown of total response rates for individual measurement questions is contained in Appendix H.

Investigative Question #2 Analysis

The second investigative question was to determine if expert senior logisticians believe the current lesson objectives for the secondary tier of the LOGPDP, (LOG 299), orient logisticians toward their combat roles and responsibilities.

This tier obtained an overall consensus of 85%, the lowest of the four tiers. There was a 100% approval consensus for "Post-Vietnam Conflicts," "Combat Environment," and "Aircraft Maintenance." With the number of repeat recommendations for the historical perspective of logistics, it was no surprise to see "Post-Vietnam Conflicts" ranked in the top three. "Combat Environment" had the highest ranking within this tier. This was expected as this tier is directed toward combat logistics. The high consensus on "Aircraft Maintenance" could possibly be attributed to the large number of respondents with an aircraft maintenance background.

Although this tier had a large number of lessons with a 100% concurrence, it also had the greatest number of non-concurrence topics of all tiers. Only 64% concurred with the Joint Planning exercise (JPLAN), however, the only comment as to why it should not be included was "Cut out

most exercise - too much time for limited value." Also, only 68% concurred with the inclusion of "Soviet Awareness" and "Joint Logistics-Over-The-Shore." Why the "Soviet Awareness" lesson failed to reach concurrence is unknown, as no comments were made as to why this was. Perhaps now that the news media has declared the cold to be over, and other worldwide conflicts have taken over the headlines, the respondents could perceive this lesson to be of lesser importance than it once was.

The lessons are listed in rank order from highest to lowest consensus in Table 6. Whenever multiple lessons had equal concurrence, the lesson with the most "Strongly approve" responses was listed first.

Table 6
LOG 299 Consensus Ranking

Lesson Title	Consensus	*Mode
Combat Environment	100%	2
Aircraft Maintenance	100%	2
Post-Vietnam Conflicts	100%	2
Logistics in Three Wars	96%	1
Reliability and Maintainability	96%	1
The Nature of Logistics	96%	1
Air Base Operability	96%	2
Crisis Action Procedures	92%	2
USAF War Planning	92%	2
Transportation	92%	2
Airland Battle	92%	2
Prepositioning	92%	2
Supply	92%	2
Logistics Command and Control	88%	1
Wartime Capability Assessment	88%	2
Special Operations Forces	87%	2
Air Reserve Forces	84%	2
Navy Logistics	84%	2
Mobility	84%	2
Air Base Support	84%	2

Table 6 (Continued)

The Deliberate Planning Process	80%	2
Mobilization Exercises	80%	2
The Non-Nuclear Threat to USAF Air Bases	80%	2
National War Planning	80%	2
Logistics Strategic Planning	76%	2
Army Logistics	72%	2
Theater Warfare Sustainability	72%	2
Multi-Theater Planning	72%	2
Soviet and NATO Logistics	72%	2
Joint Logistics Over-The-Shore	68%	2
Soviet Awareness	68%	2
Joint Planning Exercise (JPLAN)	<u>64%</u>	2
Overall Consensus:	85%	

- *1 = Strongly approve
 2 = Approve
 3 = Undecided
 4 = Disapprove
 5 = Strongly disapprove
-

The theme of the comments ran along the same lines as those for the first tier - "There is no absolute correct answer; Teach how to accomplish workarounds, as well as how to stand up and be heard." The only recommended additional topics were "Industry Mobilization Limitations" and "Critical Assessment of OPS Plans." These recommended topics are listed in Table 7. They are listed first by the order of frequency of recommendation, and then alphabetically.

All comments concerning this tier are contained in Appendix D. A breakdown of total response rates for the individual measurement questions is contained in Appendix H.

Table 7

Recommended Additional Topics for LOG 299

Title	Times Recommended
Critical Assessment of Ops Plans	1
Industrial Mobilization Limitations	1

Investigative Question #3 Analysis

The third investigative question was to determine if expert senior logisticians believe the current lesson objectives for the third tier of the LOGPDP (LOG 399) increase student comprehension of the interrelationships and interdependencies of strategic logistics management.

The population obtained consensus on all of the measurement questions for this tier, with an overall consensus of 93.1%. No other tier was able to achieve consensus on all of its lesson objectives. This tier was the highest of the four tiers. The range of consensus was from 100% down to 80%. The population concurred 100% to include "The Logistics Environment," "National Mobilization," "Strategic Mobility Triad," and "International Logistics" in this tier. None of these received criticisms as to the current content, but additional content was recommended for two of them. One respondent recommended adding a discussion of cooperation, coordination, and communication to "The Logistics Environment" lesson, while another felt that "National Mobilization" should include Strategic Stockpile, POL banks, and the roles of the Reserve and Guard

forces dialogue. "Joint Deliberate Planning" had a 96% consensus for this tier, up from 80% in the previous tier. Apparently deliberate planning is a function of higher management and therefore not as important to junior personnel.

The lowest consensus for this tier was 80% for both "Base Support Planning" and "Logistics Command and Control." The single commentary on "Base Support Planning" was "What of preparation of the airman for ground combat?" This 80% consensus is well above the 70% minimum. Two lessons tied for the next lowest consensus (up an additional 8%) at 88%. The consensus then jumped to 96% and above for the remaining topics. The lessons are listed in rank order from highest to lowest consensus in Table 8. Whenever multiple lessons had equal concurrence, the lesson with the most "Strongly approve" responses was listed first.

Two of the respondents requested that more historical thoughts be included in this tier. Another respondent asked for a broadening of the logistics spectrum covered, but failed to provide any examples. The researcher felt that the present tier covers the wide myriad of topics related to Strategic Logistics Management, thus is unsure as to what was meant by the comment. Another respondent suggested that students write a term paper within six weeks of course completion. This would serve a two-fold purpose. First, it would allow the student time to reflect on the course prior to encapsulating what he had learned. Second, it would

provide feedback to the course director as to how students are interpreting what is taught in the classroom. However, it could be impractical to implement such a procedure. The recommended topics are listed in Table 9. They are listed first by the order of frequency of recommendation, and then alphabetically. All comments for this tier of the LOGPDP are included in Appendix E.

Table 8
LOG 399 Consensus Ranking

Lesson Title	Consensus	*Mode
The Logistics Environment	100%	1
National Mobilization	100%	1
International Logistics	100%	2
Strategic Mobility Triad	100%	2
Doctrine	96%	1
Planning for National Military Strategy	96%	2
Joint Deliberate Planning	96%	2
Combat Capability Analysis	88%	1
Weapon System Acquisition	88%	1
Base Support Planning	80%	2
Logistics Command and Control	80%	2
Overall Consensus:		93.1%

- *1 = Strongly approve
- 2 = Approve
- 3 = Undecided
- 4 = Disapprove
- 5 = Strongly disapprove

Table 9
Recommended Additional Topics for LOG 399

Title	Times Recommended
Historical Thoughts (as in LOG 299)	2
Broader View of Logistics	1
Term Paper Six Weeks After Completion	1

Investigative Question #4 Analysis

The fourth investigative question was to determine if expert senior logisticians believe the current lesson objectives for the fourth tier of the LOGPDP, (LOG 499), will increase student perception of the issues currently facing senior Air Force logisticians.

This tier obtained an overall consensus of 88%, rating third out of the four tiers. No measurement question rated unanimous agreement, although "Current Air Force Logistics Issues and Policy," "Joint Logistics," and "Logistics Strategic Planning" all achieved consensus of 96%.

One respondent felt the best part of this course was the concept of getting these people out of their offices and getting them to discuss their in-depth knowledge with one another.

All but one question in this tier obtained consensus. The lesson objective entitled "Management Theory, Organization, and Styles," (question 74), not only rated the lowest consensus of any question in this tier, (57%), but was the lowest for the entire survey. One of the respondents commented that this should be taken as a given for course entry. Another said this is part of PME (Professional Military Education), thus not required here. If this lesson were removed from this tier, the overall consensus would go up to 92.3%. That would move the overall ranking of this tier to second within the LOGPDP.

One respondent "strongly disapproved" of every lesson in this tier. He backed this response with a comment that "people in this grade have had an ample opportunity to cover all these subjects. These subjects are available by correspondence through Air Command and Staff, ICAF (Industrial College of the Air Force), etc." The researcher felt that even though some lessons are available through correspondence and seminars, the student would gain a greater understanding through group interaction than by a less structured correspondence course.

The lessons are listed in rank order from highest to lowest consensus in Table 10. Whenever multiple lessons had equal concurrence, the lesson with the most "Strongly approve" responses was listed first.

Several respondents made near identical comments as to recommended additional topics for this tier: "Let the students pick a topic and let the synergy of the group iron it out." The researcher agrees that the caliber of people attending this class should provide for first hand knowledge of most current issue type topics. One respondent suggested organizational cooperation as a topic. He felt that senior officers were putting out a message of "we support our position only," rather than supporting cooperation between organizations. Another recommended a multitude of current event/current issue type topics. This researcher felt these

topics would be covered under the umbrella of the "Current Air Force Logistics Issues and Policy" block of instruction.

Table 10

LOG 499 Consensus Ranking

Lesson Title	Consensus	*Mode
Current Air Force Logistics Issues and Policy	96%	1
Joint Logistics	96%	1
Logistics Strategic Planning	96%	2
Strategic Mobility Triad	92%	2
Logistics Funding	87%	1
Interservice/Interagency Logistics	83%	1
Management Theory, Organization, and Styles	57%	2
Overall Consensus:		86.7%

- *1 = Strongly approve
- 2 = Approve
- 3 = Undecided
- 4 = Disapprove
- 5 = Strongly disapprove

These recommended topics are listed in Table 11. They are listed first by frequency of recommendation, and then alphabetically.

Table 11

Recommended Additional Topics for LOG 499

Title	Times Recommended
Current Events & How They Effect Us	1
Functions of Congress/Staffers/GAO (Government Accounting Office)	1
Organizational Cooperation	1
Total Quality Management	1

A listing of all comments for this tier are contained in Appendix F. A breakdown of total response rates for individual measurement questions is contained in Appendix H.

Investigative Question #5 Analysis

The fifth investigative question was to determine if expert senior logisticians believe the current lesson objectives of the LOGPDP as a whole aid in the development of senior level logisticians.

The LOGPDP, as a whole, obtained a consensus of 87.71%. This was determined by adding the consensus of each individual lesson objective together, then dividing that sum by the total number of lesson objectives in the LOGPDP. If the courses have an overall equal weight without regard for the number of lessons in each tier, then the overall consensus would be 88.2%. General comments on the program flow were supportive. The responses provided gave favorable comments for each tier and as an overall program. One respondent requested a copy of the syllabi because, as he stated, "it will certainly be a blueprint for the future." Not many respondents provided commentary on the LOGPDP as a entity. Perhaps the respondents felt comments were not necessary as they concurred with almost every lesson. Several respondents did make negative comments regarding the first two individual tiers. Several felt that LOG 199 contained an excessive volume of topics given the ten day timeframe. The researcher felt that although there are 24

individual lessons, they are taught to essentially introduce the student to the topic, not make him a master of it. Therefor the number of individual lesson objectives is irrelevant, rather, the focus should be on the depth of instruction in a given timeframe.

One respondent wasn't sure if he would send many people to LOG 399 until it had been taught several times, while another felt that LOG 499 was weak. The researcher felt that, based on the consensus of the individual tiers, the LOGPDP does indeed aid in the development of senior level logisticians.

Summary

This chapter began with a discussion of the survey's overall response rate, followed with a demographic breakdown of the respondent's expertise by rank, command history, and finally by Air Force Specialty Code. Next, each of the five investigative questions were analyzed on an individual basis. This analysis included a discussion of additional topic areas recommended by the respondents.

V. Conclusions and Recommendations

Overview

This chapter presents the conclusions and recommendations by investigative question in the order in which they were introduced in Chapter I. A summary section follows, in which a final conclusion is presented regarding the original research question. Finally, recommendations for follow-on study are provided.

Investigative Question #1

Question. Do expert senior logisticians believe that the current lesson objectives, established for the introductory tier of the LOGPDP, appropriately develop newly assigned logisticians?

Findings. Based upon the responses to the measurement questions associated with this question, it was determined that the initial tier of the LOGPDP is effective in developing personnel newly assigned to one of the logistics career fields. When prioritized, the lesson objectives relating to overall logistics operations were favored over those relating to specific programmatic areas.

The respondents believe that logisticians need to learn to make decisions on problems given uncertainties and incomplete information. Teach students how to respond to "real world" conditions rather than "perfect world" conditions.

One respondent felt there are too many lesson objectives covered during the 10 day course. The researcher believes that since they are introductory based, (therefore not covered in great detail, but rather to complete the picture), there are not too many lessons for a 10 day period. However, should the level of depth increase, then a balance would need to be met so as not to overwhelm the student.

Survey respondents were most critical of the "Reutilization and Marketing" and the "Logistics Support Analysis (LSA)" lesson objectives. The respondents suggested that "Reutilization and Marketing" be incorporated into the overview block rather than stand alone. The researcher believes it should be introduced wherever it best supports the overall flow of this course. Since LSA is associated with the acquisition process function rather than logistics operations, it is possible that the respondents felt that because the majority of logisticians initially receive operational assignments rather than acquisition assignments, acquisition functions lessons are not as important to the student populous. However, that is not to say that acquisition functions are not important. In fact, a large percentage of the PCE Courses taught by AFIT are directed toward the acquisition functions.

The most recommended additional topic area is the history of logistics. Since history tends to repeat itself, and we predict future requirements based upon past lessons

learned, this recommendation is well founded. When the historical perspective is provided in the introduction of a topic, it should correspond to the depth of instruction provided with that topic. As students progress through the tiers of the LOGPDP, not only will they reinforce their historical knowledge of the subject, but they will gain a stronger comprehension of its historical significance. Because of this, the researcher believes that history should be both part of the individual lessons and a lesson unto itself.

Investigative Question #2

Question. Do expert senior logisticians believe the current lesson objectives established for the secondary tier of the LOGPDP orient logisticians toward their combat roles and responsibilities?

Findings. Based upon the responses to this investigative question, the respondents agreed that this tier accustoms students to their combat roles and responsibilities.

LOG 299 presently includes a historical perspective on past conflicts and mobilization exercises. The respondents realize that if we fail to learn lessons from past mistakes then we are bound to repeat them. The researcher feels that we cannot; however, dwell strictly on the past, but we must make adjustments to our strategy and tactics based on current facts. We need to evaluate new conflicts and

exercises, (such as the 1989 Panamanian crisis "JUST CAUSE" and the 1990 South West Asia conflict "DESERT SHIELD"), and incorporate their lessons learned into the curriculum.

The respondents did not reach consensus on the "Joint Planning Exercise (JPLAN)," "Soviet Awareness," or "Joint Logistics Over the Shore." Commentary received on the JPLAN seemed to indicate that the respondents have, at some time in the past, partaken in outdated exercises that were not as effective in the utilization of their time as lectures or case studies could have been. Since it is highly unlikely that any respondent has recently participated in the JPLAN exercise, the comments regarding its effectiveness are based solely on past exercises that they may have participated in. The researcher believes that the group interaction can be extremely helpful to the learning process as long as the lesson's objectives are met.

Why the respondents didn't reach consensus on "Soviet Awareness" is an unknown. Even though the Soviet Union is currently undergoing massive change in their political and military structure, they still maintain a significant military capacity, especially in strategic forces. Until that threat is eliminated we need to monitor their intention and capability and respond accordingly.

Investigative Question #3

Question. Do expert senior logisticians believe the currently proposed lesson objectives for the third tier of

the LOGPDP increase student comprehension of the interrelationships and interdependencies of strategic logistics management?

Findings. The experts agreed that all of the proposed lesson objectives are valuable for this tier of the LOGPDP. This tier also had the highest overall consensus at 93.1%. One reason for this could be that the survey measurement questions provided a more detailed description of the lesson objectives for this tier than the others. There is no doubt that there was a tremendous amount of research put forth in the development of this course.

As with previous courses, the respondents requested that additional historical perspectives be added. Additionally, the respondents asked that the course expand the logistics spectrum covered. It would be difficult to add more breadth to this tier without taking away from its depth. The researcher felt that the initial course offering (scheduled for January 1991) should be taught using the currently proposed syllabus. After several course offerings have been completed, the lessons could be tailored as recommended by the student populous. This would provided further external validation from the student point of view.

Investigative Question #4

Question. Do expert senior logisticians believe that the currently proposed lesson objectives for the fourth tier

of the LOGPDP increase student perceptions of the issues currently facing senior Air Force logisticians?

Findings. Again, the respondents concurred with the investigative question. All but one lesson objective obtained consensus.

Most respondents stated they felt that at this level the most beneficial way to conduct this course is to provide students the opportunity to discuss current events and trends, as well as how they would respond to them. Basically, they stated a need to get together and "feed" off of one another's knowledge and concepts. The course director would need to compose a "core" syllabus with several time blocks scheduled to provide for these discussions. The researcher believes that if this course were taught in such a manner, that is, providing a large amount of flexibility in the curriculum to allow for group interaction on a variety of logistical topics, it could be a course that senior logisticians would make time for and utilize.

The single nonconcurrence lesson of this tier, "Management, Theory, Organization, and Styles," was the most rejected of the entire survey. The researcher believes that although there is a need for lessons of this nature, it applies to all senior military personnel, rather than just to Air Force logisticians. As such, it should be removed from the LOGPDP in its entirety and added to the Professional Military Education curriculum.

Investigative Question #5

Question. Do expert senior logisticians believe that the currently proposed lesson objectives of the LOGPDP as a whole aid in development of senior level logisticians?

Findings. The respondents agreed that the current lesson objectives of the LOGPDP will aid in the development of senior logisticians. One respondent referred to the combined course syllabi as the "blueprint for the future."

Although the comments received on this question were significant, the majority of these comments came from a rather small number of respondents. Thus, this analysis could be heavily skewed. That is, respondents with similar backgrounds tend to make similar responses.

As a whole, the researcher was surprised to see that LOG 399 and LOG 499 had such high overall consensus. Because neither of these courses have yet be taught, he expected the consensus rates to be much lower in comparison to the other two tiers. That is because the LOG 399 and LOG 499 course directors have not yet had the opportunity to modify their syllabus after student critiques. That opportunity has been afforded to the LOG 199 and LOG 299 course directors. Another explanation could be that because the number of topics taught in these two tiers is much less than that of the first two tiers, there were fewer lessons to disagree with.

Summary

The Research Question. Do expert senior military logisticians believe the current LOGPDP appropriately develops senior level logisticians?

Conclusion. Based upon analysis of the findings, it was determined that the current LOGPDP will be a tremendous aid in the successful development of senior level logisticians. The researcher feels that as it stands today, the LOGPDP is a dynamic educational tool for the development of logisticians. Implementing the few minor changes outlined earlier in this chapter will enhance this program even more.

The researcher felt that as a whole, the only lesson in the entire LOGPDP that should be discarded is the "Management, Theory, Organization, and Styles" lesson in LOG 499. Some of the current lesson objectives did not do as well as others and should possibly be revised, while the need for the historical aspect of logistics was expressed throughout the four tiers.

Recommendations for Further Study

Now that the lesson objectives of the LOGPDP have been evaluated and changes recommended, the next logical step is to do an in-depth review of each individual course of the LOGPDP. This would entail examining each lesson objective in detail, and then deciding if the appropriate portions of that lesson objective are being taught. As part of this

research, the methodology of instruction should be examined (i.e., lecture, exercise, or guided discussion).

Additionally, one could evaluate the length of classroom time that should be devoted to each lesson objective.

Research is also needed to ensure the level of instruction given in a lower tier is not repeated in the next higher tier, but instead that the four courses build upon one another in depth. For example, acquaint the student to a subject in one tier, and provide a more in-depth study of that same subject in the next tier.

Additionally, determine if the LOGPDP should be made mandatory for all logisticians, and/or if the LOGPDP should become the foundation of a logistics certification program (similar to the Acquisition Management Career Development Program). If attendance were mandatory, the Air Force would expose a much larger group of logisticians to the wide breadth of logistics. A simultaneous study could determine how the added requirements would impact the AFIT staff and facilities.

Finally, the researcher recommends that the LOGPDP lesson objectives be reevaluated on a biennial basis to prevent obsolescence. This would be an external evaluation accomplished by discussions between the individual course directors and representatives of the primary using commands.

Appendix A: Survey Cover Letter



DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AIR FORCE BASE OH 45433-6543

REPLY TO
ATTN OF LSM (Capt Grabowski, commercial (513) 255-4937, AV 785-4937)

SUBJECT Research Questionnaire

TO Survey Participant

1. This questionnaire is designed to solicit your views concerning the Professional Continuing Educational needs of USAF logisticians. We want to identify the requirements for recurring logistics education which extend beyond specialty boundaries. To ascertain more precisely what the Air Force Logistics Professional Development Program (LOGPDP) should include, we are asking experts such as you to participate in this survey intended to externally validate the content of the LOGPDP developed by the Air Force Institute of Technology.
2. The LOGPDP is a HQ USAF-sponsored program which established a four-tiered series of courses to be spread over the career of an Air Force logistician. Rather than focus on the details of specific functional programs, the goal is to develop well-rounded logisticians who have a comprehensive understanding of the complete logistics spectrum, to include the impact of support programs on operational capability. The timing and content of each course is designed to support progressive development of a career Air Force logistician regardless of command or specialty.
3. Please complete the attached questionnaire and return it in the enclosed envelope within 10 working days from receipt.
4. Your individual responses will be analyzed with other inputs to form a consensus and will not be attributed to you personally. All of the information you provide will be strictly confidential. The data gathered will become part of an Air Force Institute of Technology research project.
5. Your participation is completely voluntary but critical if the LOGPDP is to enable our future senior logisticians to provide the best possible support for operational requirements. We certainly appreciate your help. Thank you in advance for your assistance.

Frederick W. Westfall, Lt Col, USAF
Head, Department of Logistics Management
School of Systems and Logistics

2 Atch
1. Questionnaire
2. Return Envelope

STRENGTH THROUGH KNOWLEDGE

Appendix B:
Logistics Professional Development Program Survey

1. **Survey Objectives:**

A. To determine if expert logisticians believe we have identified the appropriate topics for each of the courses in the LOGPDP.

B. To determine if expert logisticians believe the courses present a logical, integrated, and progressive program.

C. To determine if expert logisticians believe this series of courses will meet the overall goal of developing a well rounded senior level logistician.

2. **Terms Defined:**

A. **Logistician:** For the purposes of this survey, a logistician is defined as an Air Force member (officer, enlisted member, or civil service employee) serving in any of the following functional specialties: Missile Maintenance, Aircraft Maintenance and Munitions, Transportation, Supply Management, Acquisition Logistics, and Logistics Plans and Programs.

B. **Professional Continuing Education (PCE):** A formalized process of continuous updating of technical and professional knowledge in the field of systems and logistics. The functions of PCE are: 1) to prevent professional obsolescence, and 2) to transfer new knowledge.

C. **Logistics Professional Development Program (LOGPDP):** A series of courses designed to benefit Air Force logisticians at all levels and MAJCOMs. Each is a stand alone course, yet is designed to build upon the previous course. The intent is to fill the need for logistics education outside of the functional boundaries of the logisticians' specialty and to develop senior logisticians who are knowledgeable in all aspects of logistics and prepared to provide the best possible support for operational requirements.

NOTE: Because of the continuity between the LOGPDP courses, many of the topic areas in one course are similar to those taught in the other LOGPDP courses, however, the thrust will change in terms of depth and breadth.

3. Instructions:

A. This questionnaire has 82 questions. Some questions are multiple choice and others solicit your opinion on a five point scale. At the end of each section you are afforded the opportunity to suggest what you believe are appropriate educational topics not previously included in that section.

B. Please answer each question directly on the questionnaire.

C. When you have completed the survey, please return the entire survey in the enclosed envelope.

D. Should you have any questions concerning this survey, please contact Captain Grabowski at commercial (513) 255-4937 or AUTOVON 785-4937.

SECTION 1

Questions 1-3 are designed to gather demographic data on survey respondents.

1. How many years experience do you have in each of the following functional specialties?

_____ 31XX Missile Maintenance
_____ 40XX Aircraft Maintenance and Munitions
_____ 60XX Transportation
_____ 64XX Supply Management
_____ 66XX Logistics Plans and Programs
_____ 0046 Director of Logistics
_____ 0096 Deputy Commander for Resource Management
Other (please specify)

2. What is the highest grade you have held while on active duty/civil service?

1) O-4
2) O-5
3) O-6
4) O-7
5) O-8
6) O-9
7) O-10
8) _____ Other (please specify)

3. How many years experience do you have in each of the following commands?

_____ AFLC
_____ AFSC
_____ HQ USAF
_____ MAC
_____ PACAF
_____ SAC
_____ TAC
_____ USAFE
Others to include joint/exchange assignments (please specify)

SECTION 2

Questions 4-26 refer to the initial course of the four tiered LOGPDP as described below. Please indicate your degree of approval/disapproval for each of the current subject blocks for this course.

Course Title: INTRODUCTION TO LOGISTICS (LOG 199)

Course Description:

This initial course of the LOGPDP is designed to provide a conceptual overview of Air Force logistics (with emphasis on wholesale activities), to include the environment, organizations and planning, as well as an examination of the integration of logistics systems, functions, principles, processes, and issues. The primary objectives are:

- To provide logisticians newly assigned to the logistics field with a broad based introduction to logistics including its role and meaning, environment, principles, processes, and functions.

- To develop managerial capabilities based on a foundation of appropriate logistics principles and concepts.

- To improve managerial practices by stressing the critical need for integrated action by all elements of the logistics environment.

- To provide an introductory course as a baseline to build upon in subsequent courses of instruction.

Course Methodology: The topics are listed in the normal sequence in which they are taught. Most blocks of instruction are taught through informal lectures averaging between 1.5 and 3 hours. The simulation averages 6 to 8 hours in length.

Grade Requirements:

2nd Lieutenant thru Major
TSgt thru CMSgt
GS-5 thru GS-12

Course Length:

10 Days

4. Lesson Title: Overview of Logistics

Lesson Objective: To gain a basic understanding of the role of logistics in the military environment.

Strongly approve []	Approve []	Undecided []	Dis- approve []	Strongly dis- approve []
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5. Lesson Title: Organizations Involved in the Air Force Logistics Environment

Lesson Objective: To know the roles and missions of the various organizations that contribute to the Air Force logistics support structure (DLA, AFLC, AFSC etc.).

Strongly approve []	Approve []	Undecided []	Dis- approve []	Strongly dis- approve []
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6. Lesson Title: Logistics Planning

Lesson Objective: To understand how logistics planning relates to the achievement of our national security objectives. Describe planning systems used at the base, major command/service and joint levels.

Strongly approve []	Approve []	Undecided []	Dis- approve []	Strongly dis- approve []
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7. Lesson Title: Federal Financial Management

Lesson Objective: To understand the basic concepts of current DOD financial management policies and practices.

Strongly approve []	Approve []	Undecided []	Dis- approve []	Strongly dis- approve []
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8. Lesson Title: Major Systems Acquisition

Lesson Objective: To appreciate the DOD process utilized to acquire major weapon systems.

Strongly approve []	Approve []	Undecided []	Dis- approve []	Strongly dis- approve []
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9. Lesson Title: Provisioning

Lesson Objective: To know that achievement of the provisioning objectives requires accomplishing many interdependent events in a prescribed and scheduled manner using a variety of management techniques.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

10. Lesson Title: Integrated Logistics Support (ILS)

Lesson Objective: To know how the integrated logistics support concept coordinates and controls logistics in both systems acquisition and operational support.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

11. Lesson Title: Logistics Support Analysis (LSA)

Lesson Objective: To comprehend the function of LSA within the DOD. Explain why LSA is critical in the development of new weapon systems and supporting current weapon systems.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

12. Lesson Title: Quality, Reliability, and Maintainability

Lesson Objective: To understand the DOD posture on quality, and the fundamentals of reliability and maintainability including R&M 2000 concepts, measures, and inventory impacts.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13. Lesson Title: Requirements Forecasting

Lesson Objective: To know that forecasting is a valuable tool in the wholesale requirements determination process.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

14. Lesson Title: Contracting Management

Lesson Objective: To know the contracting process, its legal concepts, tools and techniques, and the interrelationships of contracting management with other areas of logistics.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. Lesson Title: Operational/Wholesale Supply Management

Lesson Objective: To appreciate the Air Force wing/base supply operation and policies, as well as the wholesale supply operation, policies, and how they interface with one another.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

16. Lesson Title: War Reserve Materiel (WRM)

Lesson Objective: To comprehend the purpose, structure, and value of the WRM program, its relationship to wartime capability, and the operations planning process.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

17. Lesson Title: Equipment Management

Lesson Objective: To understand the Air Force Equipment Management System (AFEMS) and understand the elements involved in the equipment requirements computation.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

18. Lesson Title: The Defense Transportation Management System

Lesson Objective: To comprehend the functions of transportation, its role in Air Force logistics, and the factors shaping the strategic mobility environment.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

19. Lesson Title: Equipment Maintenance

Lesson Objective: To understand the objectives of the Air Force equipment maintenance process. To define base organizational maintenance structures and depot maintenance activities.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

20. Lesson Title: Logistics Information Systems

Lesson Objective: To understand the present logistics information systems available in both the wholesale and operational logistics environment.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. Lesson Title: Overview of International Logistics

Lesson Objective: To know the programs which comprise international logistics, the role of DOD/USAF in implementing the international logistics program, and the relationship of international logistics to the USAF logistics system.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

22. Lesson Title: LOG Plan-X Exercise

Lesson Objective: To apply logistics concepts and decision making techniques learned throughout this course to solve a variety of logistic support problems in an simulated operational environment.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

23. Lesson Title: Reutilization and Marketing

Lesson Objective: To know the concepts of the reutilization and marketing of military materiel.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

24. Lesson Title: Future Logistics Issues

Lesson Objective: To understand the major issues which are likely to affect the logistics environment in the future.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

25. (Optional question) Please suggest additional topic areas not previously listed, that you believe are appropriate for this initial tier of the LOGPDP:

26. (Optional question) Please provide any additional remarks about this course such as the focus or objectives of this initial tier of the LOGPDP, its relationship to other LOGPDP courses, and its ability to meet educational requirements of logisticians during this stage of their career.

SECTION 3

Questions 27-60 refer to the second course of the LOGPDP, "Combat Logistics," as described below. Please indicate your degree of approval/ disapproval for each of the current subject blocks for this course.

Course Title: COMBAT LOGISTICS (LOG 299)

Course Description:

Combat Logistics provides logisticians with an overview of combat logistics plans, strategies, and procedures that will likely be implemented in a wartime scenario. It is designed to provide an understanding of how logistics contributes to the overall war effort and war requirements.

- To provide a structured orientation in the wartime roles and responsibilities of logistics managers.

- To define how these roles and responsibilities are integrated into overall USAF and DOD wartime preparations.

- To acquaint logistics managers with wartime planning documents and combat logistic procedures.

- To provide an anchor to which subsequent on-the-job training and formal development of logisticians can be tied.

Course Methodology: The topics are listed in the normal sequence in which they are taught. Most blocks of instruction are taught through informal lectures averaging between 1.5 and 3 hours. The simulation averages 9 to 10 hours in length. Some selected briefings are presented in a classified mode.

Grade Requirements:

Captain
MSgt thru CMSgt
GS-09 thru GM-13

Course Length:

12 days

27. Lesson Title: The Nature of Logistics

Lesson Objective: Comprehend the meaning of the term logistics and its application in the USAF. Describe the relationship between strategy, tactics, and logistics. Describe the principles and processes relating to Combat Support Doctrine. Grasp the relationship of combat support, combat operations, and combat capability.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

28. Lesson Title: Logistics in Three Wars

Lesson Objective: Comprehend the impact of logistics support upon combat operations during World War II, Korea, and Vietnam. Compare/contrast logistics operations in each war. Know the lessons learned in each war.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

29. Lesson Title: Post-Vietnam Conflicts (Falklands, Granada, etc.)

Lesson Objective: Comprehend the effects of logistics support on combat operations since the end of the Vietnam War and the changes that resulted due to lessons learned.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

30. Lesson Title: Mobilization Exercises

Lesson Objective: Comprehend the logistic problems which arose during mobilization exercises such as NIFTY NUGGET and PROUD SPIRIT, and their effects on logistics planning and procedures due to lessons learned.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

31. Lesson Title: The Non-Nuclear Threat to USAF Air Bases

Lesson Objective: Comprehend the potential non-nuclear threat to USAF logistics operations overseas.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

32. Lesson Title: Soviet Awareness

Lesson Objective: Know the geographical, historical, and political determinants that influence the development of Soviet military power.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

33. Lesson Title: Airland Battle (ALB)

Lesson Objective: Know the key features of the ALB, USAF policy concerning ALB, and the effects of ALB on USAF logistics operations.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. Lesson Title: Logistics Command and Control

Lesson Objective: Comprehend the command and control structure that establishes logistics requirements, manages logistics operations, and resource allocations.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

35. Lesson Title: Combat Environment

Lesson Objective: Comprehend that the wartime environment can affect a wide range of logistics support operations as identified by base supportability exercises such as "Salty Demo."

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

36. Lesson Title: Air Reserve Forces (Air Force Reserves and Air National Guard)

Lesson Objective: Comprehend the elements of the Total Force Policy and its effect on logistics readiness.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

37. Lesson Title: National War Planning

Lesson Objective: Comprehend the role of the three primary national military planning systems (Joint Strategic Planning System; Biennial Planning, Programming, and Budgeting System; and the Joint Operation Planning System) in the development of military requirements, resources, and operation plans in support of national security objectives.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

38. Lesson Title: USAF War Planning

Lesson Objective: Comprehend the role of the USAF War and Mobilization Plan in support of theater operation plan development. Comprehend USAF regulatory guidance for operations planning, to include base support planning.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

39. Lesson Title: Supply

Lesson Objective: Comprehend the complexities of the combat supply environment. Identify the categories and levels of availability of WRM. Summarize the problems of supply management in transitioning from peacetime Main Operating Base operations to contingency operating locations.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

40. Lesson Title: Air Base Support

Lesson Objective: Understand the organizational structure and taskings of Civil Engineering and Services to provide adequate support in wartime.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

41. Lesson Title: Transportation

Lesson Objective: Comprehend DOD's organic transportation system structure and its ability to satisfy wartime requirements. Comprehend DOD's reliance on U.S. civilian transportation capability and its impact on sustainability.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

42. Lesson Title: Aircraft Maintenance

Lesson Objective: Identify the maintenance organization structures, policies, and programs developed to provide surge capability/repair during wartime operations at both operational and depot level.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

43. Lesson Title: Prepositioning

Lesson Objective: Comprehend the purposes of prepositioning. Identify the major prepositioning programs of the military services for separate theaters.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

44. Lesson Title: Army Logistics

Lesson Objective: Explain the overall process within the Army logistics system and how operational forces are resupplied in the battlefield. Understand the differences between Army and USAF logistics systems.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

45. Lesson Title: Navy Logistics

Lesson Objective: Explain the overall process within the Navy logistics system and how operational forces are resupplied at sea. Understand the differences between Navy and USAF logistics systems.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

46. Lesson Title: Air Base Operability

Lesson Objective: Summarize lessons learned in survivability/ operability exercises such as SALTY DEMO. Identify the major functional areas in air base operability. Identify types of actions which can improve survivability during conventional, chemical, or nuclear attack.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

47. Lesson Title: Theater Warfare Sustainability

Lesson Objective: Comprehend the complexity of sustaining combat operations in a theater of operations (using Southeast Asia as an example). Examine the mobilization, deployment, theater infrastructure, wartime beddown, and sustainment of forces assigned to the theater commander.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

48. Lesson Title: Logistics Strategic Planning

Lesson Objective: Understand how USAF prepares long range plans to establish combat capability through Combat Support Doctrine, AF Logistics Concept of operations, and Logistics Strategic Planning.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

49. Lesson Title: The Deliberate Planning Process

Lesson Objective: Comprehend the role and elements of the Joint Operation Planning System (JOPS) in developing, deploying, employing, and sustaining forces.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

50. Lesson Title: Crisis Action Procedures

Lesson Objective: Comprehend the organizations, their roles, and the applicable policies and procedures for military response to a crisis situation.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

51. Lesson Title: Mobility

Lesson Objective: Comprehend the USAF mobility process and its relationship to the JOPS.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

52. Lesson Title: Multi-Theater Planning

Lesson Objective: Comprehend the impact of concurrent multi-theater operations on US logistics support structure and operation plans.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

53. Lesson Title: Wartime Capability Assessment

Lesson Objective: Comprehend the role of capability assessment systems which provide information that enable Air Force logisticians to improve combat capability and sustainability.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

54. Lesson Title: Joint Planning Exercise (JPLAN)

Lesson Objective: Apply the principles of joint planning in the selection of USAF force packages for deployment as well as the management of strategic airlift for the movement of Army and USAF forces as part of a simulated operation plan.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

55. Lesson Title: Soviet and NATO Air Logistics

Lesson Objective: Comprehend and compare the operation and structure of both Soviet and NATO logistics systems.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

56. Lesson Title: Joint Logistics Over-The-Shore
(Optional)

Lesson Objective: Know how logistics over-the-shore supports combat operations.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

57. Lesson Title: Special Operations Forces (Optional)

Lesson Objective: Comprehend logistics supportability required for Special Operations Forces.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

58. Lesson Title: Reliability and Maintainability
(Optional)

Lesson Objective: Know how improved reliability and maintainability aid the Air Force mission.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

59. (Optional question) Please suggest additional topic areas not previously listed, that you believe are appropriate for this tier of the LOGPDP:

60. (Optional question) Please provide any additional remarks about this course such as the focus or objectives of this second tier of the LOGPDP, its relationship to other LOGPDP courses, and its ability to meet educational requirements of logisticians during this stage of their career:

SECTION 4

Questions 61-73 refer to the third tier of the LOGPDP "Strategic Logistic Management," as described below. Please indicate your degree of approval/disapproval for each of the current subject blocks for this course.

Course Title: STRATEGIC LOGISTICS MANAGEMENT (LOG 399)

Course Description:

Designed to broaden and deepen student understanding of logistics doctrine, processes, programs, policies, planning, functions, and current initiatives. It emphasizes logistics as a system through analysis of the interrelationships of acquisition, wholesale support, operational support, inter-service, and allied logistics. The primary objectives include the following:

- To broaden student understanding of the total logistics "system" (spectrum) from the national through operational levels.
- To enhance understanding of the roles, missions, responsibilities, interrelationships, and interdependencies which exist within the logistics framework for more effective combat support to forces.
- To improve the decision making skills of logistics managers at all levels of command through the practical application of management principles while participating in small group activities.

Course Methodology: The course includes informal lectures by faculty and guest speakers to establish a baseline for discussion, but emphasizes student involvement through practical exercises, simulations, and case studies.

Grade Requirements:

Major and Lt Colonel
SMSgt and CMSgt
GM-13 and GM-14

Course Length:

10 days

NOTE: The first offering of Strategic Logistics Management will be offered during January of 1991. The following outline of blocks of instruction represents our initial analysis of the elements which should be included in this course. We will appreciate your candid thoughts on our proposed curriculum and ask that you suggest other candidate topics as well as any helpful thoughts you might have regarding course development.

61. Lesson Title: THE LOGISTICS ENVIRONMENT

Lesson Objective: Comprehend that logistics is a multi-faceted, complex system composed of interrelated organizations, functions, and processes. Understand the relationship between strategy, tactics and logistics. Analyze the environmental factors that impact logistics support for contingency operations.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

62. Lesson Title: DOCTRINE

Lesson Objective: Analyze basic Aerospace Doctrine (AFM 1-1) and Combat Support Doctrine (AFM 1-10) as a basis for understanding the role of logistics from industrial capability to the operational support level. Concurrently examine the principles of war and understand how they apply to planning logistics support. In small groups, participate in an exercise to analyze the eight major processes of USAF Combat Support Doctrine and develop more specific doctrine for a selected logistics functional area.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

63. Lesson Title: LOGISTICS COMMAND AND CONTROL

Lesson Objectives: Analyze the National Security Organization, Military Department/Service organizations, Combatant Command organizations and understand the fundamental differences between the administrative and operational chains of command. Analyze how logistics requirements are established and resources are controlled. In small groups, participate in a case study to develop future USAF organizational structures for different levels of command and analyze the potential impact on logistics supportability.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

64. Lesson Title: PLANNING FOR NATIONAL MILITARY STRATEGY

Lesson Objective: Analyze long range, operational and support planning at the national level. Examine the Joint Strategic Planning System (JSPS); The Biennial Planning, Programming and Budgeting System (BPPBS); and the Joint Operation Planning System (JOPS) and compare the responsibilities, timing, interrelationships overlaps and disconnects of the three systems. Assess USAF Logistics Strategic Planning and discuss the impact on logistics as National Military Strategy responds to a changing world environment. In small groups, develop a specified action plan in support of a theater Logistics Strategic Plan.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

65. Lesson Title: NATIONAL MOBILIZATION

Lesson Objective: Examine national mobilization to include industrial capability/preparedness and total force policy. Review lessons learned from exercises which tested United States ability to mobilize its industrial and military capabilities. Examine current industrial and military capability to sustain combat operations across the spectrum of conflict.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

66. Lesson Title: JOINT DELIBERATE PLANNING

Lesson Objective: Analyze the purpose of the Joint Operation Planning System (JOPS). Examine the relationship between USAF war planning and JOPS. In small groups, participate in a case study to develop the Concept of Support for a hypothetical theater CINC's war plan.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

67. Lesson Title: STRATEGIC MOBILITY TRIAD

Lesson Objective: Analyze the impact of transportation and prepositioning on strategic and operational planning. Compare the capability, responsiveness and flexibility of inter- and intra-theater ground, air and sea transportation. Comprehend the impact of the civilian transportation system in a deregulated environment on Department Of Defense mobility requirements. Examine the efficiency (costs), capability (effectiveness), and flexibility of service prepositioning programs against global security commitments.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

68. Lesson Title: BASE SUPPORT PLANNING

Lesson Objective: Analyze the requirement for air bases to survive and operate in a hostile environment. Assess current initiatives to enhance air base operability. Review USAF mobility, reception and support policy and planning guidance. In small groups, participate in a simulation to assess air base operability in a hostile contingency.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

69. Lesson Title: WEAPON SYSTEM ACQUISITION

Lesson Objective: Examine the DOD process for acquisition of major weapon systems. Analyze the importance of supportability as a co-partner of cost, schedule and performance in the acquisition process. Discuss the impacts of the current political and economic environments on the acquisition of future weapon systems.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

70. Lesson Title: INTERNATIONAL LOGISTICS

Lesson Objective: Examine Foreign Military Sales, Bilateral Host Nation Support and alliance logistics and their impacts on operational logistics and the United States industrial base.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

71. Lesson Title: COMBAT CAPABILITY ANALYSIS

Lesson Objective: Review current USAF programs designed to assess various elements of combat capability/supportability. Comprehend the difficulty of developing a comprehensive, accurate assessment methodology which accounts for the variabilities of a contingency environment. In small groups, participate in an exercise to develop a methodology for a selected functional combat support program.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

72. (Optional question) Please suggest additional topic areas not previously listed, that you believe are appropriate for this tier of the LOGPDP:

73. (Optional question) Please provide any additional remarks about this course such as the focus or objectives of this third tier of the LOGPDP, its relationship to other LOGPDP courses, and its ability to meet educational requirements of logisticians during this stage of their career:

SECTION 5

Questions 74-82 refer to the fourth tier of the LOGPDP "Logistics Executive Development," as described below. Please indicate your degree of approval/disapproval for each of the current subject blocks for this course.

Course Title: LOGISTICS EXECUTIVE DEVELOPMENT (LOG 499)

Course Description:

Designed to provide senior logisticians the opportunity to examine management systems and values affecting Air Force programs, policies, organizations, and issues currently affecting logistics will be discussed within the context of Air Force and DOD logistics systems.

Offer the most effective ways of assessing and influencing organizational and interpersonal behavior.

Provide innovative approaches to leadership, decision making, and problem solving.

Develop and improve executive level skills in communication, administration, and management.

Enhance understanding of Air Force logistics doctrine, principles, organization, and environment in the broader context of national policies and objectives. The primary objectives include the following:

- To analyze the moral and ethical impacts of the senior level logistics decision making process.

- To provide the opportunity to exchange ideas and assess problems among the various logistics disciplines.

- To examine the roles and different viewpoints of logistics decision makers in service (USAF), joint (JCS, Unified/Specified Commands), and international (NATO) positions.

- To examine policy problems and strategic planning from a broad "Logistics" view rather than a functional point of view.

- To expand understanding of global logistics issues.

Course Methodology: This course will have a flexible curriculum to enable the students to examine the most current issues facing senior logisticians. Most topics will be introduced by faculty to establish a baseline followed by

expert guest speakers who will address the issues key elements.

Grade Requirements:
Lt Colonel and Colonel
GM-14 and GM-15

Course Length:
6 Days

74. Lesson Title: MANAGEMENT THEORY, ORGANIZATION, AND STYLES.

Lesson Objective: Examine interpersonal and inter-organizational issues.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

75. Lesson Title: CURRENT AIR FORCE LOGISTICS ISSUES AND POLICY.

Lesson Objective: Examine the impact of support to and from allies and friendly nations in terms of burden sharing, international agencies, wholesale stock levels, and host nation support.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

76. Lesson Title: JOINT LOGISTICS.

Lesson Objective: Examine the policy and process issues of Air Force logistics support in relationship to the Joint Chiefs of Staff and the Combatant (Unified/Specified) Commanders.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

77. Lesson Title: INTERSERVICE/INTERAGENCY LOGISTICS.

Lesson Objective: Examine issues that affect provision of support to and from other services and the DLA.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

78. Lesson Title: STRATEGIC MOBILITY TRIAD.

Lesson Objective: Examine the policy, strategy, and impact of both funding and geopolitical changes on airlift, sealift, and prepositioning.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

79. Lesson Title: LOGISTICS FUNDING.

Lesson Objective: Examine the Biennial Planning, Programming, and Budgeting System (BPPBS) (especially budget execution processes) based on current DOD priorities and the impacts on wholesale and operational logistics of disjointed logistics funding among various appropriations.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

80. Lesson Title: LOGISTICS STRATEGIC PLANNING.

Lesson Objective: Examine the process and procedures of the Air Force Logistics Strategic Plan and efforts needed to improve it.

Strongly approve	Approve	Undecided	Dis- approve	Strongly dis- approve
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

81. (Optional question) Please suggest additional topic areas not previously listed, that you believe are appropriate for this tier of the LOGPDP:

82. (Optional question) Please provide any additional remarks about this course such as the focus or objectives of this fourth tier of the LOGPDP, its relationship to other LOGPDP courses, and its ability to meet educational requirements of logisticians during this stage of their career.

Appendix C: Comments on the Introduction to Logistics Tier
LOG 199

(Questions 1 through 3 were related to demographics).

Question 4: Overview of Logistics.

- This should be the meat of the course - it should likely use 50% or more of class time.

Question 5: Organizations Involved in the Air Force Logistics Environment.

- Organizations which contribute to the achievement of the product of the logistics system! Who is in charge of the structure? What about AFMPC & Air Force Finance center? Using commands?

- But, don't need excruciating detail and diagrams.

Question 6: Logistics Planning.

- But extremely broad.

- Poor log planning can also screw it up!

- But, discussion above should be very limited and of broad guidance - no details.

Question 7: Federal Financial Management.

- Again broad - most people aren't involved with anything beyond base or command level.

- Again - should be descriptive and broad, only.

Question 8: Major Systems Acquisition.

- This is wholesale logistics? The process takes too long - too costly. How can you appreciate it/

Question 9: Provisioning.

- So does creating a warfighting capability.

- Don't see a need for a block of instruction - brief discussion in another session would do it.

Question 10: Integrated Logistics Support (ILS).

- Major item.

- To know why ILS is necessary is more important to understanding logistics!

- Again, include in another block - no detail.

Question 11: Logistics Support Analysis (LSA).

- Major item.

- As above, no detail.

Question 12: Quality, Reliability, and Maintainability.

- As above, no detail.

Question 13: Requirements Forecasting.

- OK. But I don't know how you can provide "overview" with covering this idea.

Question 14: Contracting Management.

- No detail! Describe/discuss.

Question 15: Operational/Wholesale Supply Management.

- They are part of a total system and were designed to interface -- it just didn't happen!

- No need - cover in overview.

Question 16: War Reserve Material (WRM).

- As stated - No detail - Concept only.

Question 17: Equipment Management.

- Doubtful need or value.

Question 18: The Defense Transportation Management System.

- No detail - Discuss faults & problems.

Question 19: Equipment Maintenance.

- No detail.

Question 20: Logistics Information Systems.

- I have serious doubt this is necessary - Certainly should not be detailed.

Question 21: Overview of International Logistics.

- Again no detail! Just explain! Discuss!

Question 22: LOG Plan-X Exercise.

- Make sure these are updated and really useable.

- No! Not good exercise for overview!

Question 23: Reutilization and Marketing.

- No - Include briefly in overview.

Question 24: Future Logistics Issues.

- It appears you are teaching them to live in today's world, not tomorrow's!

- Good discussion opportunities.

Question 25: Suggested additional topics for this tier.

- History of logistics in military actions lesson learned.

- TQM Total Quality Management or QP-4 in AFLC must be included because it is the way of Logistics in the future. Everyone in logistics from the crew chief to the aircraft or system manufacturer is involved - from design to application.

- You have too many already.

- Decision making under uncertainty. Many of the courses imply that good decisions are the result of following proven principles and using available data. In a world of change the logistician must be prepared to decide, and act, on less than perfect data using unproven methods.

- There is a logistics system. Then there is the product of the logistics system -- Your logisticians had better know the difference.

- Brief description of Micro-Economics and relation of National Economics with military logistics: - Discussion.

- History of Military Logistics.

Question 26: Additional remarks as to the focus or objectives of this tier, its relationship to the other LOGPDP courses, and its ability to meet the logisticians requirements at this stage of their career.

- What is difference between #17 (Equipment Management) & #19 (Equipment Maintenance)?

- To ask the average student, and the average instructor, to understand and appreciate 24 separate lessons in ten days, is asking a bit much.

- Nice Plan. Looks like a big bite for only 10 days.

- This course should be required during the first six months after being assigned as an Air Force Logistician.

- Sounds like a very well thought out program.

- Why do nations have military forces? How do they use them? When nations use their military forces -- What do those forces do? Logisticians do many things, many of which you talk about in these questions of you -- But what are they seeking to achieve by doing all of these many things?
* The logistician had better know the answer.

- Emphasis on wholesale logistics is faulty - should at least be 50-50 with retail (I hate those terms too!) Logistics ability (not capacity) is a function of field activity - deserves far more attention.

- Rather than lecture - I suggest readings followed by seminar-type classes. Discussion/debate encouraged. Further, we must not insist on a "school solution" - very few events/activities in logistics may now be proven to have a "correct" answer/process/action/ etc. Room for a number of beliefs. We should encourage thought and empathy for a contrasting view.

- I sense too much unnecessary detail - not enough conceptual & philosophical discussion.

- This is a good baseline course. It's very important that our new logisticians receive an orientation on the broad spectrum of our field. We're guilty of over-specialization.

Appendix D: Comments on the Combat Logistics Tier
LOG 299

Question 27: The Nature of Logistics.

- Great if you can describe relationship between strategy/tactics & logistics. I've never seen it in 27 years.

Question 28: Logistics in Three Wars.

- For interest & to understand each war is different; different environment, leadership, weapons, strengths, and talent.

Question 29: Post-Vietnam Conflicts (Falklands, Granada, etc.).

- Weapon system technology has forced the evolution in logistics - otherwise we would still support the Wright-Flyers.

Question 30: Mobilization Exercises.

- Discussion?

Question 31: The Non-Nuclear Threat to USAF Air Bases.

- We just discovered this threat a few years ago - yet it was there all the time!

- Don't understand why this?

Question 32: Soviet Awareness.

No comments were received on this lesson.

Question 33: Airland Battle (ALB).

- Discuss.

Question 34: Logistics Command and Control.

- Does it do it well?

Question 35: Combat Environment.

- Do you have a solution?

- Should have some discussion with people who had combat experience.

Question 36: Air Reserve Forces (Air Force Reserves and Air National Guard).

- No details.

Question 37: National War Planning.

- With no detail - Lots of discussion.

Question 38: USAF War Planning.

- Concept only, no detail.

Question 39: Supply.

- When the enemy is trying to KILL YOU, everything becomes a little more complex.

Question 40: Air Base Support.

- This is not the answer!

- Not in detail - too much subject to change.

Question 41: Transportation.

- Why isn't this taught by ATC in their transportation course?

- Problems & limitations discussion very important!

Question 42: Aircraft Maintenance.

- Be aware of what contract maintenance does to surges.

- Concept only - Discuss.

Question 43: Prepositioning.

- Concept only, Discuss.

Question 44: Army Logistics.

- Why?

- No detail.

Question 45: Navy Logistics.

- Why?

- No detail.

Question 46: Air Base Operability.

- DISCUSS!

Question 47: Theater Warfare Sustainability.

- Discuss - Problem/solution.

Question 48: Logistics Strategic Planning.

- OK if done by seminar, but not if as lecture.

Question 49: Crisis Action Procedures.

- No comments were received on this lesson.

Question 50: Crisis Action Procedures.

- Lesson 50 was too broad a description to make an evaluation. i.e. what organizations? Doesn't "everyone" react to a crisis?

- Does this include GMR?

Question 51: Mobility.
- Concept & discussion.

Question 52: Multi-Theater Planning.
No comments were received on this lesson.

Question 53: Wartime Capability Assessment.
- Doubt their validity -Think effort is worthless.

Question 54: Joint Planning Exercise (JPLAN).
No comments were received on this lesson.

Question 55: Soviet and NATO Logistics.
No comments were received on this lesson.

Question 56: Joint Logistics Over-The-Shore.
- Concept & discussion.

Question 57: Special Operations Forces.
- Discussion.

Question 58: Reliability and Maintainability.
- No point in this course.

Question 59: Suggested additional topics for this tier.
- Again, you cram a lot into a very short time.

- Industry mobilization limitations. This course should realistically address the capabilities of industry (at the supplier level) to respond to wartime requirements.

- Critical assessment of Ops plans. This course should teach the junior logistician how to stand up and be heard when Ops plans cannot be supported.

- This course would be particularly important to our personnel who do not attend the AFIT degree courses. Our people need to see the big picture.

Question 60: Additional remarks as to the focus or objectives of this tier, its relationship to the other LOGPDP courses, and its ability to meet the logisticians requirements at this stage of their career.

- This survey of everything and anything related to combat may obscure the point. The point should be how one adapts what might be a somewhat inflexible peacetime logistics system to the demands of the next war. "Workarounds" are built only by those who know the system well. Survey courses risk failing to convey the required knowledge.

- There seems to be much focus on old wars and not enough on special operations or small wars.

- Reduce apparent detail - increase seminar approach - decrease lecture. Cut out most exercise (too much time for limited value).

- Our people should be trained to learn and respect the uniqueness of the other services. Would be very beneficial if Army, Navy, and Marine logisticians briefed on their own organizations. All three have a lot to teach us.

- Lessons 40 (Air Base Support) & 46 (Air Base Operability) might best be handled consecutively.

Appendix E: Comments on the Strategic Logistics
Management Tier LOG 399

Question 61: The Logistics Environment.

- Need to use the broader definition of logistics. Discuss more of relationships and obvious needs for cooperation, coordination, and communication.

Question 62: Doctrine.

- The current AFM 1-10 is a very poor document.
- Strong discussion including those who oppose 1-10.

Question 63: Logistics Command and Control.

- USAF efforts to understand and gain a centralized command and control capability are instructive. Functional management of separate elements of the logistic system may continue to frustrate USAF's purpose.

Question 64: Planning For National Military Strategy.

- No comments were received on this lesson.

Question 65: National Mobilization.

- Include GMR - include Strategic stockpile, POL bank, Role of Reserves, Guard, etc.

Question 66: Joint Deliberate Planning.

- No comments were received on this lesson.

Question 67: Strategic Mobility Triad.

- What of historic problems? Current status? Probable near future status? Lessons from past wars?

Question 68: Base Support Training.

- What of preparation of the airman for ground combat?

Question 69: Weapon System Acquisition.

- NO!

Question 70: International Logistics.

- Discuss.

Question 71: Combat Capability Analysis.

- Doubtful, in my mind.

Question 72: Suggested additional topics for this tier.

- More Historical thoughts, as given in LOG 299.
- This one needs to have group approach - where students learn from each other in seminar mode. The "Sage in the stage" won't like it here.

- Needs to emphasize broader view of logistics - what of manpower, health, etc?

- Log History.

Question 73. Additional remarks as to the focus or objectives of this tier, its relationship to the other LOGPDP courses, and its ability to meet the logisticians requirements at this stage of their career.

- Sounds like a good program.

- Outstanding Also, actually Superior.

- Do this on a Graduate level - reading in advance of course - mailed ahead - course as seminar - essay exam on concepts - Term paper required within six weeks of completion or no credit for attendance or career mgmt.

- This would be an excellent course, perhaps mandatory, for any of our logisticians joining the Air Staff or Joint Staff.

- For some reason, this course doesn't really turn me on. Can't explain it. The doctrine exercise? What will it do? Hard to discuss. JSPS & JCS - I'm just not sure they will help. I'm uncomfortable - not sure I would send many people until it was done a few times.

Appendix F: Comments on the Logistics Executive
Development Tier LOG 499

Question 74: Management Theory, Organization, and Styles.

- It would seem to me that students at this level and time in service would have an understanding of this subject and it would be taken as a given for course entry.

- I believe management style should be left to the PME world.

Question 75: Current Air Force Logistics Issues and Policy.

No comments were received on this lesson.

Question 76: Joint Logistics.

No comments were received on this lesson.

Question 77: Interservice/Interagency Logistics.

No comments were received on this lesson.

Question 78: Strategic Mobility Triad.

No comments were received on this lesson.

Question 79: Logistics Funding.

- Should be part of whole.

Question 80: Logistics Strategic Planning.

No comments were received on this lesson.

Question 81: Suggested additional topics for this tier.

- Again let these guys pick a topic and thresh it out. There are always people in a class that have more in-depth knowledge than the course director - Take advantage of this in time set aside just for that purpose. The best part of this course is getting 'em out of the office and together. The topics don't matter much.

- Organizational cooperation: This course should explain the need for and methods of obtaining cooperation between functional managers. It seems that the LTs & CAPTs assume there is no cooperation but the LT COL & COLs & GENS have perfected their "our position only" mentality. The O5, O6, & O7s need to learn to work together in real teams.

- No where in here do you at all challenge the system!

- Outstanding.

- Better spend time on what we think will happen in current budget constraints. What will they mean to the

logistics environment. Less people/more contract/less construction/where does mobility fit in/ reserve guard role. What happens to European/Far East forces. How do we prepare to go back if we need to. A lot of problems facing us tomorrow - better discuss.

- Somewhere in the education of senior military people we should bring in senior civilian logistics experts (maybe retired military) & discuss how they think the military should/could operate more effectively. They have seen the military operations, they are still in logistics, they may/may not still deal with the military through government contracts, they have seen the good & the bad. I think some of these folks would enjoy it & we all might benefit from the discussion. Also I feel we need to somehow capture the thoughts of retired military senior people & ask them how we can operate better. Their advice on how to download the military in changing times - Who to keep/who to get rid of/should we download (not sure we have a choice)/is there a better way. What lessons do we have to learn/relearn not to forget from the past.

Question 82: Additional remarks as to the focus or objectives of this tier, its relationship to the other LOGPDP courses, and its ability to meet the logisticians requirements at this stage of their career.

- LOG 499 is a repeat 399. People of this grade have had ample opportunity to cover all these subjects. These subjects are available by correspondence through Command & Staff, Air War college, Industrial College of the Air Force, etc.

- A discussion of TQM/QP-4 is essential for managers at this level since they are the people that will be dealing with industry, the depots, and local manufacture.

- Looks good. I'd love to teach it.

- This course seems weak to me. At the O5 and above level I suggest more real world problem solving and appropriation.

- We spend \$300 billion (less 100 billion for retirees like me) to maintain a military for with a capability to wage some level of war. You just spent this years \$200 billion -- would it be impertinent of me to ask how much war can we wage? If you cannot answer that (i.e. the product of the logistics system) how can you do valid trade-off analysis anywhere in the system?

- Outstanding.

- Keep at high plane. Do not repeat the obvious.
Demand effort and time. Require advance work (Readings).
Hold to grade/rank minimums - met them or don't admit.

- Functions of Congress, staffers, GAO, etc.

Appendix G: Comments on the Overall LOGPDP

- I believe your objectives for the various levels of this Professional Development Program are well stated and that they will be most useful to the AFIT educational programs.

- I believe you should include a block of instruction on Ethics and Integrity in your Contracts, Acquisition and Procurement blocks.

- The area of Fixed Reserves and Strategic POL Reserve is also an important item.

- Within the block on Airlift, the Civil Reserve Airlift Fleet (CRAF) should be covered.

- Under the Industrial Base and Industrial Mobilization, include a presentation on the various strategic materials and resources which our National Defense is dependent upon. In a similar fashion, the role of DIPEC and our various mobilization/reserve techniques should also be presented.

- The changing world situation; i.e., the collapse of the Warsaw Pact and its impact on our Defense planning and budget aspects of this, plus the major cutbacks which will focus within the Nation's Defense forces, should be included.

- Please send me a copy of your various curricula as this program develops. It will certainly be a "blueprint for the future."

Appendix H: Question Response Rates

Questions 4 through 24 refer to the "Introduction to Logistics" (LOG 199) tier.

<u>Response</u>	<u>Question #</u>							
	4	5	6	7	8	9	10	11
Strongly approve	68%	68%	56%	48%	44%	21%	60%	36%
Approve	32%	16%	36%	40%	52%	67%	24%	36%
Undecided	-	16%	08%	12%	-	08%	-	04%
Disapprove	-	-	-	-	04%	04%	16%	24%
Strongly disapprove	-	-	-	-	-	-	-	-

<u>Response</u>	<u>Question #</u>							
	12	13	14	15	16	17	18	19
Strongly approve	29%	28%	40%	24%	16%	13%	44%	28%
Approve	63%	64%	48%	72%	60%	79%	52%	68%
Undecided	08%	-	08%	04%	24%	04%	-	04%
Disapprove	-	08%	04%	04%	-	04%	04%	-
Strongly disapprove	-	-	-	-	-	-	-	-

<u>Response</u>	<u>Question #</u>							
	20	21	22	23	24	27	28	29
Strongly approve	36%	08%	54%	08%	36%	52%	52%	25%
Approve	60%	76%	38%	60%	40%	40%	44%	75%
Undecided	04%	12%	04%	28%	16%	08%	04%	-
Disapprove	-	04%	-	04%	08%	-	-	-
Strongly disapprove	-	-	04%	-	-	-	-	-

Questions 27 through 58 refer to the "Combat Logistics" (LOG 299) tier.

<u>Response</u>	<u>Question #</u>							
	27	28	29	30	31	32	33	34
Strongly approve	52%	52%	25%	32%	24%	12%	28%	48%
Approve	40%	44%	75%	48%	56%	56%	64%	40%
Undecided	08%	04%	-	20%	20%	24%	08%	12%
Disapprove	-	-	-	-	-	08%	-	-
Strongly disapprove	-	-	-	-	-	-	-	-

<u>Response</u>	<u>Question #</u>							
	35	36	37	38	39	40	41	42
Strongly approve	33%	28%	20%	32%	24%	20%	32%	28%
Approve	67%	56%	60%	60%	68%	64%	60%	72%
Undecided	-	08%	04%	08%	08%	16%	08%	-
Disapprove	-	08%	16%	-	-	-	-	-
Strongly disapprove	-	-	-	-	-	-	-	-

<u>Response</u>	<u>Question #</u>							
	43	44	45	46	47	48	49	50
Strongly approve	28%	08%	32%	44%	32%	24%	36%	36%
Approve	64%	68%	52%	52%	40%	52%	44%	56%
Undecided	16%	16%	16%	04%	20%	16%	04%	08%
Disapprove	08%	08%	-	-	08%	08%	16%	-
Strongly disapprove	-	-	-	-	-	-	-	-

<u>Response</u>	<u>Question #</u>							
	51	52	53	54	55	56	57	58
Strongly approve	32%	28%	32%	12%	12%	28%	39%	44%
Approve	52%	44%	56%	52%	60%	40%	48%	52%
Undecided	08%	28%	08%	28%	20%	16%	-	-
Disapprove	08%	-	04%	08%	08%	16%	13%	04%
Strongly disapprove	-	-	-	-	-	-	-	-

Questions 61 through 71 refer to the "Strategic Logistics Management" (LOG 399) tier.

<u>Response</u>	<u>Question #</u>							
	61	62	63	64	65	66	67	68
Strongly approve	88%	56%	32%	40%	52%	40%	36%	36%
Approve	12%	40%	48%	56%	48%	52%	64%	44%
Undecided	-	04%	20%	04%	-	08%	-	20%
Disapprove	-	-	-	-	-	-	-	-
Strongly disapprove	-	-	-	-	-	-	-	-

<u>Response</u>	<u>Question #</u>		
	69	70	71
Strongly approve	64%	38%	60%
Approve	24%	62%	28%
Undecided	08%	-	12%
Disapprove	-	-	-
Strongly disapprove	04%	-	-

Questions 74 through 80 refer to the "Logistics Executive Development" (LOG 499) tier.

<u>Response</u>	<u>Question #</u>						
	74	75	76	77	78	79	80
Strongly approve	18%	60%	56%	58%	46%	54%	38%
Approve	39%	36%	40%	25%	46%	33%	57%
Undecided	26%	-	-	12%	04%	04%	-
Disapprove	13%	-	-	-	-	04%	-
Strongly disapprove	04%	04%	04%	04%	04%	04%	04%

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[REDACTED] [REDACTED]
[REDACTED]

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)		2. REPORT DATE September 1990	3. REPORT TYPE AND DATES COVERED Master's Thesis	
4. TITLE AND SUBTITLE Validation of the Logistics Professional Development Program by Expert Senior Military Logisticians			5. FUNDING NUMBERS	
6. AUTHOR(S) William J. Grabowski, Captain, USAF				
7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES) Air Force Institute of Technology, WPAFB OH 45433-6583			8. PERFORMING ORGANIZATION REPORT NUMBER AFIT/GLM/LSM/90S-22	
9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)			10. SPONSORING / MONITORING AGENCY REPORT NUMBER	
11. SUPPLEMENTARY NOTES				
12a. DISTRIBUTION AVAILABILITY STATEMENT Approved for public release; distribution unlimited			12b. DISTRIBUTION CODE	
13. ABSTRACT (Maximum 200 words) The primary objective of this research was to externally validate, through the use of expert senior Air Force logisticians (to include active duty, retired and civil service), the appropriateness of the subject matter taught in the four tiers of the AFIT Logistics Professional Development Program (LOGPDP). A survey was administered to 40 of these experts; 26 were returned for a response rate of 65%. Based upon analysis of the responses, it was determined that the current LOGPDP will be a tremendous aid in the successful development of senior level logisticians. The four tiers achieved consensus of 88%, 85%, 93%, and 87%, respectively, with an overall consensus of 88%. The researcher felt that as a whole, the only lesson in the entire LOGPDP that should be discarded is the "Management, Theory, Organization, and Styles" lesson in LOG 499. This lesson only reached a 57% consensus, the lowest of the entire LOGPDP. Some of the other lesson objectives were not well received and should possibly be revised, while the overall historical aspect of logistics needs more emphasis. This need was expressed throughout the four tiers.				
14. SUBJECT TERMS Logistics Professional Development Program, Education, Surveys, Mail Surveys, AFIT Professional Continuing Education Programs			15. NUMBER OF PAGES 135	
			16. PRICE CODE	
17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT U	